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# PRESERVATION OF NIAGARA FALLS

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## HEARINGS

BEFORE THE

## COMMITTEE ON FOREIGN AFFAIRS

HOUSE OF REPRESENTATIVES

JANUARY 16, 18, 19, 20, 23, 26, AND 27, 1912

ON

**H. R. 6746**

BY MR. SMITH OF NEW YORK: A BILL TO GIVE EFFECT TO THE  
FIFTH ARTICLE OF THE TREATY BETWEEN THE UNITED  
STATES AND CANADA, SIGNED JANUARY 11, 1909

AND

**H. R. 7694**

BY MR. SIMMONS: A BILL TO GIVE EFFECT TO THE FIFTH ARTICLE  
OF THE TREATY BETWEEN THE UNITED STATES AND  
GREAT BRITAIN, SIGNED JANUARY 11, 1909

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### COMMITTEE ON FOREIGN AFFAIRS.

[Committee room, gallery floor, west corridor. Telephone 230. Meets on call.]

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## PRESERVATION OF NIAGARA FALLS.

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COMMITTEE ON FOREIGN AFFAIRS,  
HOUSE OF REPRESENTATIVES,

*Tuesday, January 16, 1912—10.15 a. m.*

Mr. WILLIAM SULZER, of New York, chairman.

The CHAIRMAN. We will take up for consideration this morning the bills relating to Niagara Falls, introduced by Mr. Simmons and by Mr. Smith of New York. We will hear from Representative Simmons. You may proceed, Mr. Simmons.

Mr. FLOOD. Mr. Simmons, what is the number of your bill?

Mr. SIMMONS. H. R. 7694.

The CHAIRMAN. Proceed, Mr. Simmons.

Mr. Chairman and gentlemen of the committee, the matter you have under consideration is of the deepest importance to me for the reason that I not only represent the district in which Niagara Falls is located, but I live in the city of that name.

I lived there before the great electrical development was commenced, and I have therefore had the very best of opportunities to observe the conditions as they have arisen, and under the circumstances feel that I fully understand the existing situation.

Prior to the advent of the electrical development of Niagara Falls the people who resided there were engaged almost entirely in entertaining tourists who visited that point.

There was a population of about 10,000 people residing in the villages of Niagara Falls and Suspension Bridge.

These people had their capital invested in hotels, stores, boarding houses, and the like, and the business of entertaining tourists was the principal occupation of these villages.

These people had a greater interest in the Falls of the Niagara than any other people in the world; in fact they were the only people who had a financial interest in the Falls.

If any movement had been started (or even contemplated) which in their opinion would have a tendency to deleteriously affect the scenic beauty of the Falls, and thereby lessen the tourist travel to that place, these people would have been the first to raise their voices in opposition, and, in my judgment, would have had the most equitable right to object, for the reason that they were the only people who had vested interests in the Falls.

I am here to-day to represent those people and also 25,000 additional residents who have made Niagara Falls their place of residence since the beginning of the power development; and I wish to say to you that if it were possible to have every one of them appear before this committee they would frankly and unanimously testify that the diversion of the waters of the Niagara River for power purposes has not harmfully affected the scenic beauty of the Falls in the remotest extent, and that the tourist travel to the Falls has not been lessened thereby, but, on the contrary, has been increasing.

This is no issue, in my judgment, that contemplates doing a thing which would seriously injure the Niagara Falls, or which would in any perceptible way change their scenic status.

We merely desire legislation which will permit the use for industrial purposes of that portion of the water of the Niagara River that is not necessary for scenic beauty, and thus conserve the use of such water for the benefit of a great section of our country which is contiguous to the Falls.

This is the issue—the only issue.

The question along these lines has been taken up by the United States Government and by Great Britain.

The two countries, desiring to determine what proportion of the water of the Niagara River could be diverted for commercial uses without impairment of the scenic side of the proposition, appointed able representatives.

The representatives of the United States met the representatives of the Dominion of Canada and the question was fully and carefully considered to the end that the joint commission reported their findings, which were embodied in a treaty, which treaty has been adopted by the United States and Great Britain.

Mr. FLOOD. When did this power development begin at Niagara Falls?

Mr. SIMMONS. About 1895.

Mr. MORRIS COHN, of Niagara Falls. That is hardly correct. The company that I represent had a canal put through in 1878.

Mr. SIMMONS. I supposed he meant the development on a large scale.

Mr. FLOOD. That is what I meant, Mr. Simmons.

By the terms of this treaty we were permitted to divert 20,000 cubic feet of water per second and Great Britain (i. e. Canada) was permitted to divert 36,000 cubic feet per second.

We thought that this division was unfair to us in that our proportion was only about one-half of the amount allotted to Canada, but nevertheless, we are perfectly satisfied with the terms of the treaty and all we are now seeking to do is to secure legislation which will permit us to take the small additional amount of water allowed us under the treaty.

Mr. FLOOD. When was that treaty negotiated or concluded?

A MEMBER. 1910.

Mr. SIMMONS. Of the 20,000 cubic feet allowed us under the treaty, permits have been issued by the Secretary of War to the amount of 15,600 cubic feet.

The CHAIRMAN. The convention or treaty between the United States and Great Britain was concluded January 11, 1909.

Mr. SIMMONS. There remains to us an additional amount of 4,400 cubic feet, which we desire to take to bring us to our maximum.

Therefore, in considering this matter, I take it that the question involved is as to whether or not the 4,400 cubic feet of water could be diverted without serious injury to the Falls.

Our country has willingly consented that Canada may divert from the Niagara River, out of the waters owned jointly by Great Britain and the United States, 36,000 cubic feet per second; and in view of this I could not conceive it to be the part of wisdom for us to restrict ourselves to our present diversion of only 15,600 cubic feet and deny

ourselves the advantages of the small additional amount of 4,400 cubic feet which Canada (Great Britain) has willingly consented we may take.

Mr. DIFENDERFER. How much of the 36,000 feet do the Canadians divert at this time?

Mr. SIMMONS. I think I have the figures here.

Mr. DIFENDERFER. But they do not use all they are allowed to under the treaty?

Mr. SIMMONS. Oh, no.

A MEMBER. How much are we allowed under the treaty?

The CHAIRMAN. Twenty thousand cubic feet.

Mr. SIMMONS. The taking of this 4,400 cubic feet of water will not, in my opinion, have the slightest effect upon the eye.

I do not believe that any man could stand near the brink of the Cataract and tell that this amount of water was being diverted or not.

In measurement there is some slight effect, but to the eye there would positively be none.

The effect upon the American Falls by the diversion of 4,400 cubic feet of water would be to reduce its flow less than one-tenth of 1 inch; the effect upon the Canadian Falls would be to reduce them less than  $1\frac{1}{2}$  inches.

I have looked upon the Falls under so many different conditions that I have no hesitancy in saying this diversion would not be appreciable to the eye in the least extent.

If legislation was proposed here which was seeking a diversion of the water of the Niagara River to the extent that it would impair the scenic beauty of the Falls, the people I represent would be the first to raise their voices in opposition; but we who know the situation as no other people in the world know it, would and do testify from our daily observations that the diversion so far made has not impaired in the least degree the scenic effect of the Falls; and, on the other hand, I trust you will most seriously consider the benefits which have been derived from the use of the small amount of water which has been and is being diverted.

Under the existing law the Secretary of War has issued permits for the diversion of 15,600 cubic feet of water, of which 500 cubic feet are for the purposes of the Erie Canal, and 15,100 cubic feet for the two existing power companies at Niagara Falls.

Mr. DIFENDERFER. They are corporations?

Mr. SIMMONS. Yes.

The CHAIRMAN. Those are the only companies on our side that are using the water?

Mr. SIMMONS. Yes, sir. I want you gentlemen to get into your minds the great benefit that has come from the use of something that has not hurt anybody. From the use of this 15,100 cubic feet of water for the Niagara Falls companies there has been a daily development of 204,800 horsepower.

To produce this result from coal would require annually the consumption of 3,686,400 tons of coal.

The accomplishment of this prodigious result for the benefit of the industrial side of the proposition has resulted in diminishing the flow of water over the American Falls but three-eighths of 1 inch, and has diminished the flow of the water over the Canadian Falls



4.8 inches—results that have been apparent only to the instruments of the engineers and in no way apparent to the eye.

Now, with these facts before us, both as to the effects and the benefits, the question is, can we permit the further diversion of 4,400 cubic feet of water?

A MEMBER. How much is being utilized of this 15,600 feet?

The CHAIRMAN. All of it.

Mr. SIMMONS. Practically all of it. We have before us, to guide us to a proper conclusion, the actual results which have been obtained from the tests which have been made.

These tests were made and results obtained by a closing down of the operations of the power companies and restoring to the river its full natural flow, and thus ascertaining accurately the diminution of the flow by measurement, which measurement revealed (as I have stated) that the engineers' instruments disclosed the fact that the diversion of 15,100 cubic feet of water had the effect of reducing the flow over the American Falls three-eighths of 1 inch, and over the Canadian Falls 4.8 inches.

Therefore, upon this hypothesis, if we should permit the diversion of the additional 4,400 cubic feet of water permitted under the treaty, it would affect the flow of water over the American Falls less than one-tenth of 1 inch, and over the Canadian Falls less than  $1\frac{1}{2}$  inches.

Now, while this diversion shows this small result under the engineers' instruments, I emphatically contend that the most accurate eye could not determine the fact as to whether one-tenth of 1 inch on the American side, or a little over 1 inch on the Canadian side was either increasing or diminishing the flow over the Falls.

This is the proposition, pure and simple, that you have before you in determining whether the diversion of the additional 4,400 cubic feet of water will or will not seriously affect the scenic beauty of the Niagara Falls.

Now, gentlemen, if this additional 4,400 cubic feet of water can be diverted as permitted by the treaty, the benefits to the American people will result in the development of about 80,000 horsepower, thereby conserving in nature's storehouse coal to the amount of 1,440,000 tons yearly.

If you will permit me to digress a little from the statement affecting solely the power development on the American side, I would like to present to you figures showing the benefits to the people of the United States and Canada if the 56,000 cubic feet of water per second permitted by the treaty is used in the power development on both sides of the Niagara River; and I contend that the whole of the 56,000 feet can be used without the human eye ever being able to detect that the scenic beauty of Niagara Falls has been diminished in the least.

Mr. FLOOD. In your bill, who gets the benefit of this 4,400 feet?

Mr. SIMMONS. My bill does not attempt to give it to anybody.

Mr. FLOOD. You leave it with the Secretary of War?

Mr. SIMMONS. Yes; to increase the diversion from 15,600 to 20,000.

The CHAIRMAN. That is the amount we are entitled to under the treaty.

Mr. SIMMONS. That is the amount we are entitled to under the treaty.

Mr. LEVY. That is given by the State of New York?

Mr. SIMMONS. Not necessarily.

Mr. FLOOD. No; the Federal Government controls that.

Mr. LEVY. Do you mean that that 4,400 cubic feet additional shall be given without the consent of the commissioners of the State of New York?

Mr. SIMMONS. Yes; we want the commissioners of the State of New York to consent to that.

If the 56,000 cubic feet per second were used it would produce, daily, 790,200 horsepower.

To produce this same horsepower from coal would require the annual consumption of 14,241,600 tons of coal.

I therefore assert, without fear of successful contradiction, that the Niagara power proposition is the most valuable conservation on the American continent—

Mr. DIFENDERFER. Then is it not too great to give to any individual corporation?

Mr. SIMMONS. Now, that is entirely with the committee. I am not commenting on that just now.

Mr. DIFENDERFER. That, to me, has a greater point than the scenic beauty.

Mr. SIMMONS (continuing). And while I have before given merely the figures showing the saving resulting from this heretofore wasted water force for a single year, I want to impress upon you what this saving would amount to in a period of 50 years.

In that period it would result in the enormous saving of 712,080,000 tons of coal.

All of this can be accomplished without injury to the scenic beauty and without touching any of our exhaustible resources. It can be done by simply utilizing nature's energy, which has not heretofore been contributing in any appreciable extent to the benefit of the American people.

I wish to bring to your attention these points: First, will you recommend the diversion of the additional 4,400 cubic feet of water permitted under the treaty, which I contend, from the statements I have made, can be diverted without the least harmful effect upon the esthetic side of the situation and the use of which water will be of such enormous benefit to our people?

Second, will you not permit the raising of the limit of importation of power generated in Canada as fixed under existing law?

There is not, in my judgment, any doubt but that the maximum amount of water permitted under the treaty will be used by Canada; and as to this view I have never heard a dissenting expression of opinion from any one who has made a study of the subject.

It is therefore merely a question as to whether we are going to erect barriers against our progress and prohibit the importation of the power generated from such water to the United States to stimulate industrial activity in the electrical transmission zone—which means a distance of probably 300 miles from Niagara Falls.

Third, existing laws prohibit all diversion of water from the Niagara River except the 15,600 cubic feet above referred to, permits for which diversion have been granted by the Secretary of War.

We have a fall in the Niagara River of 82 feet between the head of the Whirlpool Rapids and what is known as the Devil's Hole, a distance of about 1½ miles.

This section of the river is several miles below the Falls of the Niagara, and power development there would have nothing whatever to do with the scenic beauty of the Falls, and yet existing law prohibits the diversion of water from this section of the Niagara River, although the law, when enacted, was intended solely for the preservation of the scenic beauties of the Niagara Falls.

I am confident that it was the intention of those who voted for the act which passed Congress and became a law on June 29, 1906, which act was entitled "An act for the preservation of Niagara Falls, etc.," that said act should control the waters of the Niagara River above the Falls only. Nevertheless the existing law prohibits the further diversion of water either above or below the Falls, and therefore, by an inadvertence in the language of the existing law, it is an estopper to the carrying out of power development from the Niagara River below the Falls, which has no connection with, or bearing upon, the object of the legislation sought to be attained by the said act of June 29, 1906.

Mr. FLOOD. You make no limitation on Canada in your bill?

Mr. SIMMONS. No; Canada was the one, if anyone should have desired to prohibit its coming over. They were the ones to have done it, and in making the treaty they were perfectly willing that the power should be brought over, and it would seem to me that it would be perfectly absurd for us to continue a law denying the right for us to use it.

Mr. FLOOD. Have you considered the question as to whether there should be a charge on what is being used?

Mr. SIMMONS. As far as New York is concerned, we have a public-service commission. If it went into another State, it would be under another arrangement.

Mr. FLOOD. Do you think this company should be permitted to charge more on this side than in Canada?

Mr. SIMMONS. I think not, but the Canadian Government transmits the power to the people without any profit, or at actual cost to the Government. Now, if the United States Government is going to transmit this power, why, I would say that we would probably get it under like conditions, but I don't think a private corporation could deliver it at the same price as in Canada.

Mr. FLOOD. Don't you think there ought to be some limit, so that the cost would not exceed the price of transmission?

Mr. SIMMONS. We have a commission which regulates all these things.

Mr. FLOOD. Is there such a commission in Michigan?

Mr. SIMMONS. I do not know; but in so far as the State of New York is concerned we have ample protection.

Mr. KENDALL. Does your State commission have jurisdiction over commodities transmitted into the State by other commissions?

Mr. SIMMONS. I think so. I am not a lawyer, but we are going to have some one who can answer.

Mr. KENDALL. This is a commodity transmitted into this State—

The CHAIRMAN. The New York public-service commission has the right under the statutes of New York to regulate the price of power.

Mr. KENDALL. But suppose the purchase is made by the consumer in Buffalo from the Canadian authorities, and the delivery is made in pursuance of that purpose?

The CHAIRMAN. That would be a contract, and the State could not interfere with that.

Mr. LEVY. That does not cover the point. The private concern you are speaking of—

Mr. KENDALL. I am speaking of a consumer in Buffalo who purchases in Canada. Would the public-service commission in New York have jurisdiction to control the rates?

Mr. SIMMONS. To be paid by the private consumer?

Mr. KENDALL. Yes.

Mr. SIMMONS. Absolutely.

Mr. DIFENDERFER. Without a tariff? [Laughter.]

Mr. SIMMONS. The tariff would not have anything to do with it. The commissioners have only to do with what the company shall charge the consumer. If they think it is too high, they have full authority to make the price whatever they please, and there is no redress from the public-service commission.

Mr. LEVY. What is the present law in relation to transmission? That is, do you have to have a permit from the Secretary of War in order to bring it here?

Mr. SIMMONS. The existing law provides that we can bring in 160,000 horsepower, and that states the amount that each company shall bring in.

Mr. KENDALL. I did not mean to interrupt your statement. I think you had better go on.

Mr. SIMMONS. I think I could give you my statement better if I was not drawn out on different phases of the case. There are a great many to be heard and they want to get away. I shall be very glad to come before the committee at any time you wish. Now, the importation of power from Canada I think I covered.

The bill I have introduced in the House and which is under consideration by your committee, viz, H. R. 7694, has for its purpose nothing other than to perfect the treaty with Great Britain.

It would permit the Secretary of War to issue permits, in addition to the 15,600 cubic feet already issued, up to 20,000 cubic feet—the maximum under the treaty—which means the additional 4,400 cubic feet I have before referred to.

It changes existing laws in regard to the importation of power from Canada.

Under the existing law we are permitted to bring in only 160,000 horsepower from Canada.

Under my bill no limitation is placed upon the importation of power from Canada.

We merely take the position that if power is generated in Canada from the waters of the Niagara River (within the limitation of diversions we have agreed to under the treaty) we would welcome the importation of such amount as we could not.

We believe that such a policy is in keeping with American enterprise and American thrift.

The CHAIRMAN. Quite true, and any limitation is conducive to monopoly, is it not?

Mr. SIMMONS. Yes; within the treaty. I do not think there should be any limitation whatever. That was only put in the law temporarily until we could negotiate with Great Britain, and we have had that negotiation.



Mr. FLOOD. We bring over 160,000 horsepower. Who brings that over now?

Mr. SIMMONS. The Niagara Falls Power Co. and Niagara, Lockport & Ontario Co.

My bill would also raise the limitation as to the diversion of water from the Niagara River below the Falls and make it possible for Congress hereafter to grant permits that this great natural energy should be utilized if in the wisdom of Congress it seems desirable to have it done.

There is certainly nothing in connection with the entire proposition under consideration which is a greater injustice than to have a law upon our statute books designed solely for the purpose of preserving Niagara Falls and yet controlling waters which have no connection whatever with the Falls of the Niagara.

A MEMBER. Does the public-service commission fix the price of the power that the corporations take? Do they fix the price? That is, do the power companies pay anything? Or is there any revenue coming to the State of New York or the General Government?

Mr. SIMMONS. No; there is none.

[H. R. 7694, Sixty-second Congress, First Session.]

A BILL To give effect to the fifth article of the treaty between the United States and Great Britain signed January 11, 1909.

*Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,* That no water shall be diverted from the Niagara River above the Falls of Niagara within the State of New York for power purposes without the written consent of the Secretary of War, who is hereby authorized to give such consent by revocable permits, to persons, companies, or corporations having authority from the said State to make such diversions, and to a total amount not exceeding in the aggregate the amount allowed by the treaty between the United States and Great Britain signed at Washington on the 11th day of January, in the year 1909: *Provided,* That no such permit shall be granted allowing diversions of water exceeding in the aggregate 15,000 cubic feet per second without the consent of the State of New York and of the commissioners on the part of the United States in the international joint commission provided for by said treaty.

Every diversion of water in violation of the foregoing provisions shall be a misdemeanor, punishable by a fine not exceeding \$2,500 or by imprisonment not exceeding one year, or both, in the discretion of the court.

The Secretary of War shall make regulations for preventing the diversion of water from the Niagara River above the Falls of Niagara in excess of the amounts consented to by him pursuant to the said treaty and to this act, and all permits for the diversion of water granted under the act entitled "An act for the control and regulation of the waters of Niagara River, for the preservation of Niagara Falls, and for other purposes," approved June 29, 1906, shall continue in force until revoked by the Secretary of War or superseded by other permits issued by him.

The CHAIRMAN. The committee will now hear from Representative Charles B. Smith, who has a bill before the committee—No. 6746.

The Smith bill reads as follows:

[H. R. 6746, Sixty-second Congress, first session.]

A BILL To give effect to the fifth article of the treaty between the United States and Canada, signed January 11, 1909.

*Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,* That no water shall be diverted from Niagara River above the Falls of Niagara, within the State of New York, for power purposes without the written consent of the Secretary of War, who is hereby authorized to consent, by revocable permits, to the making of such diversions to a total amount not exceeding in the aggregate the amount allowed

by the treaty between the the United States and Great Britain of January 11, 1909: *Provided*, That all permits for the diversion of water granted under the act entitled "An act for the control and regulation of the waters of Niagara River, for the preservation of Niagara Falls, and for other purposes, approved June 29, 1906," shall continue in force and effect to the recipients thereof and their respective successors until revoked by the Secretary of War or superseded by other permits issued by him: *Provided further*, That any permit for such diversion of water in excess of a daily diversion at the rate of 15,600 cubic feet of water per second shall only be made to the State of New York, with full power and authority to said State to make such grant or grants of the use thereof as it may determine to be for the public interest: *Provided further*, That no one individual, company, or corporation shall be permitted to divert under any permit or permits granted under the authority of said act of June 29, 1906, water exceeding in the aggregate a daily diversion at the rate of 8,600 cubic feet per second.

SEC. 2. That no person, company, or corporation shall transmit from the Dominion of Canada into the United States electrical power developed from the use of the waters of the Niagara River in excess of the amount so transmitted by such person, company, or corporation on or before May 13, 1910, the date of proclamation of said treaty, without the written consent of the Secretary of War, who is hereby authorized to give consent for such transmission of additional electrical power by revocable permit, to contain an express condition that the person, company, or corporation receiving or operating under such permit shall not directly or indirectly, through any subsidiary company or otherwise, charge or receive for any such additional electrical power so transmitted within the United States a higher price than is charged or received by such person, company, or corporation, or any allied or subsidiary company, under like or substantially similar circumstances, within the Dominion of Canada for electrical power developed from said waters, and that such condition in respect of price shall be by the terms of such permit made specifically enforceable in and by any State within which such electrical power so developed within the Dominion of Canada shall be transmitted.

SEC. 3. That any person, company, or corporation diverting water from the said Niagara River or its tributaries, or transmitting electrical power into the United States from Canada, except as herein stated, or violating any of the provisions of this act, shall be deemed guilty of a misdemeanor, and on conviction thereof shall be punished by a fine not exceeding \$2,500 nor less than \$500, or by imprisonment (in the case of a natural person) not exceeding one year, or by both such punishments, in the discretion of the court: *Provided*, That the removal of any structures or parts of structures erected in violation of this act, or any construction incidental to or used for such diversion of water or transmission of power as is herein prohibited, as well as any diversion of water or transmission of power in violation hereof, may be enforced or enjoined at the suit of the United States by any circuit court having jurisdiction in any district in which the same may be located, and proper proceedings to this end may be instituted under the direction of the Attorney General of the United States.

SEC. 4. That the provisions of this act shall remain in force and effect during the life of said treaty.

SEC. 5. That for accomplishing the purposes detailed in this act the sum of \$10,000, or so much thereof as may be necessary, is hereby appropriated from any moneys in the Treasury not otherwise appropriated.

SEC. 6. That the right to alter, amend, or repeal this act is hereby expressly reserved.

MR. SHARP. Mr. Smith, has the amount of the diversion been fixed by a treaty?

MR. SMITH. Yes, sir; it is 20,000 feet on the American side and 36,000 feet on the Canadian side.

MR. SHARP. Now, has there been some legislation by this Government?

MR. SMITH. That legislation was prior to the establishment of the treaty. I want to say, Mr. Chairman, that I do not desire to go into the merits of the legislation now. My main purpose in addressing the committee was to place in the record the Burton Act and also the treaty with Great Britain.

The CHAIRMAN. There being no objection, the reporter will incorporate in the record the treaty between the United States and Great Britain and the Burton Act and the resolution extending the same, the joint resolution of the House, No. 262, approved March 3, 1909.

THE BURTON LAW.

[Public, No. 367.]

An Act For the control and regulation of the waters of Niagara River, for the preservation of Niagara Falls, and for other purposes.

*Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,* That the diversion of water from Niagara River or its tributaries, in the State of New York, is hereby prohibited, except with the consent of the Secretary of War as hereinafter authorized in section two of this act: *Provided*, That this prohibition shall not be interpreted as forbidding the diversion of the waters of the Great Lakes or of Niagara River for sanitary or domestic purposes, or for navigation, the amount of which may be fixed from time to time by the Congress of the United States, or by the Secretary of War of the United States under its direction.

SEC. 2. That the Secretary of War hereby authorized to grant permits for the diversion of water in the United States from said Niagara River or its tributaries for the creation of power to individuals, companies, or corporations which are now actually producing power from the waters of said river, or its tributaries, in the State of New York, or from the Erie Canal; also permits for the transmission of power from the Dominion of Canada into the United States, to companies legally authorized therefor, both for diversion and transmission, as hereinafter stated, but permits for diversion shall be issued only to the individuals, companies, or corporations as aforesaid, and only to the amount now actually in use or contracted to be used in factories the buildings for which are now in process of construction, not exceeding to any one individual, company, or corporation as aforesaid a maximum amount of eight thousand six hundred cubic feet per second, and not exceeding to all individuals, companies, or corporations as aforesaid an aggregate amount of fifteen thousand six hundred cubic feet per second; but no revocable permits shall be issued by the said Secretary under the provisions hereafter set forth for the diversion of additional amounts of water from the said river or its tributaries until the approximate amount for which permits may be issued as above, to wit, fifteen thousand six hundred cubic feet per second, shall for a period of not less than six months have been diverted from the waters of said river or its tributaries, in the State of New York: *Provided*, That the said Secretary, subject to the provisions of section five of this act, under the limitations relating to time above set forth, is hereby authorized to grant revocable permits, from time to time, to such individuals, companies, or corporations, or their assigns, for the diversion of additional amounts of water from the said river or its tributaries to such amount, of any, as, in connection with the amount diverted on the Canadian side, shall not injure or interfere with the navigable capacity of said river, or its integrity and proper volume as a boundary stream, or the scenic grandeur of Niagara Falls; and that the quantity of electrical power which may by permits be allowed to be transmitted from the Dominion of Canada into the United States shall be one hundred and sixty thousand horsepower: *Provided further*, That the Secretary, subject to the provisions of section five of this act, may issue revocable permits for the transmission of additional electrical power so generated in Canada, but in no event shall the amount included in such permits, together with the said one hundred and sixty thousand horsepower and the amount generated and used in Canada, exceed three hundred and fifty thousand horsepower: *Provided always*, That the provisions herein permitting diversions and fixing the aggregate horsepower herein permitted to be transmitted into the United States, as aforesaid, are intended as a limitation on the authority of the Secretary of War, and shall in no wise be construed as a direction to said Secretary to issue permits, and the Secretary of War shall make regulations preventing or limiting the diversion of water and the admission of electrical power as herein stated: and the permits for the transmission of electrical power issued by the Secretary of War may specify the persons, companies, or corporations by whom the same shall be transmitted, and the persons, companies, or corporations to whom the same shall be delivered.

SEC. 3. That any person, company, or corporation diverting water from the said Niagara River or its tributaries, or transmitting electrical power into the

United States from Canada, except as herein stated, or violating any of the provisions of this act, shall be deemed guilty of a misdemeanor, and on conviction thereof shall be punished by a fine not exceeding two thousand five hundred dollars nor less than five hundred dollars, or by imprisonment (in the case of a natural person) not exceeding one year, or by both such punishments, in the discretion of the court. And, further, the removal of any structures or parts of structures erected in violation of this act, or any construction incidental to or used for such diversion of water or transmission of power as is herein prohibited, as well as any diversion of water or transmission of power in violation hereof, may be enforced or enjoined at the suit of the United States by any circuit court having jurisdiction in any district in which the same may be located, and proper proceedings to this end may be instituted under the direction of the Attorney General of the United States.

SEC. 4. That the President of the United States is respectfully requested to open negotiations with the Government of Great Britain for the purpose of effectually providing by suitable treaty with said Government, for such regulation and control of the waters of Niagara River and its tributaries as will preserve the scenic grandeur of Niagara Falls and of the rapids in said river.

SEC. 5. That the provisions of this act shall remain in force for three years from and after date of its passage, at the expiration of which time all permits granted hereunder by the Secretary of War shall terminate unless sooner revoked, and the Secretary of War is hereby authorized to revoke any or all permits granted by him by authority of this act, and nothing herein contained shall be held to confirm, establish, or confer any rights heretofore claimed or exercised in the diversion of water or the transmission of power.

SEC. 6. That for accomplishing the purposes detailed in this act the sum of fifty thousand dollars, or so much thereof as may be necessary, is hereby appropriated from any moneys in the Treasury not otherwise appropriated.

SEC. 7. That the right to alter, amend, or repeal this act is hereby expressly reserved.

Approved, June 29, 1906.

House joint resolution 262, extending the operation of an act for the control and regulation of the waters of Niagara River, for the preservation of Niagara Falls, and for other purposes.

Whereas the provisions of the act entitled "An act for the control and regulation of the waters of Niagara River, for the preservation of Niagara Falls, and for other purposes," approved June twenty-ninth, nineteen hundred and six, will expire by limitation on June twenty-ninth, nineteen hundred and nine; and

Whereas a date for the termination of the operation of said act was provided therein, but with a view to the more permanent settlement of the questions involved by a treaty with Great Britain, and by further legislation appropriate to the situation, and such treaty not having been negotiated, it is desirable that the provisions of said act should be continued until such permanent settlement can be made: Therefore, be it

*Resolved, etc.,* That the provisions of the aforesaid act be, and they are hereby, extended for two years from June twenty-ninth, nineteen hundred and nine, being the date of the expiration of the operation of said act, save in so far as any portion thereof may be found inapplicable or already complied with.

Approved, March 3, 1909.

TREATY SERIES, NO. 548—TREATY BETWEEN THE UNITED STATES AND GREAT BRITAIN—  
BOUNDARY WATERS BETWEEN THE UNITED STATES AND CANADA.

Signed at Washington January 11, 1909.

Ratification advised by the Senate March 3, 1909.

Ratified by the President April 1, 1910.

Ratified by Great Britain March 31, 1910.

Ratifications exchanged at Washington May 5, 1910.

Proclaimed May 13, 1910.

BY THE PRESIDENT OF THE UNITED STATES OF AMERICA.

A PROCLAMATION.

Whereas a treaty between the United States of America and His Majesty the King of the United Kingdom of Great Britain and Ireland and of the British

dominions beyond the seas, Emperor of India, to prevent disputes regarding the use of boundary waters and to settle all questions which are now pending between the United States and the Dominion of Canada involving the rights, obligations, or interests of either in relation to the other or to the inhabitants of the other along their common frontier, and to make provision for the adjustment and settlement of all such questions as may hereafter arise, was concluded and signed by their respective plenipotentiaries at Washington on the eleventh day of January, one thousand nine hundred and nine, the original of which treaty is, word for word, as follows:

The United States of America and His Majesty the King of the United Kingdom of Great Britain and Ireland and of the British dominions beyond the seas, Emperor of India, being equally desirous to prevent disputes regarding the use of boundary waters and to settle all questions which are now pending between the United States and the Dominion of Canada involving the rights, obligations, or interests of either in relation to the other or to the inhabitants of the other along their common frontier, and to make provision for the adjustment and settlement of all such questions as may hereafter arise, have resolved to conclude a treaty in furtherance of these ends, and for that purpose have appointed as their respective plenipotentiaries:

The President of the United States of America, Elihu Root, Secretary of State of the United States; and

His Britannic Majesty, the Right Honorable James Bryce, O. M., his ambassador extraordinary and plenipotentiary at Washington.

Who, after having communicated to one another their full powers, found in good and due form, have agreed upon the following articles:

#### PRELIMINARY ARTICLE.

For the purposes of this treaty boundary waters are defined as the waters from main shore to main shore of the lakes and rivers and connecting waterways or the portions thereof, along which the international boundary between the United States and the Dominion of Canada passes, including all bays, arms, and inlets thereof, but not including tributary waters which in their natural channels would flow into such lakes, rivers, and waterways, or waters flowing from such lakes, rivers, and waterways, or the waters of rivers flowing across the boundary.

#### ARTICLE I.

The high contracting parties agree that the navigation of all navigable boundary waters shall forever continue free and open for the purposes of commerce to the inhabitants and to the ships, vessels, and boats of both countries equally, subject, however, to any laws and regulations of either country, within its own territory, not inconsistent with such privilege of free navigation and applying equally and without discrimination to the inhabitants, ships, vessels, and boats of both countries.

It is further agreed that so long as this treaty shall remain in force this same right of navigation shall extend to the waters of Lake Michigan and to all canals connecting boundary waters and now existing or which may hereafter be constructed on either side of the line. Either of the high contracting parties may adopt rules and regulations governing the use of such canals within its own territory and may charge tolls for the use thereof, but all such rules and regulations and all tolls charged shall apply alike to the subjects of citizens of the high contracting parties and the ships, vessels, and boats of both of the high contracting parties, and they shall be placed on terms of equality in the use thereof.

#### ARTICLE II.

Each of the high contracting parties reserves to itself or to the several State governments on the one side and the Dominion or Provincial Governments on the other, as the case may be, subject to any treaty provisions now existing with respect thereto, the exclusive jurisdiction and control over the use and diversion, whether temporary or permanent, of all waters on its own side of the line which in their natural channels would flow across the boundary or into boundary waters; but it is agreed that any interference with or diversion from their natural channel of such waters on either side of the boundary, resulting in any injury on the other side of the boundary, shall give rise to the same rights and entitle the injured parties to the same legal remedies as if such injury took place in the country where such diversion or interference

occurs; but this provision shall not apply to cases already existing or to cases expressly covered by special agreement between the parties hereto.

It is understood, however, that neither of the high contracting parties intends by the foregoing provision to surrender any right which it may have to object to any interference with or diversions of waters on the other side of the boundary the effect of which would be productive of material injury to the navigation interests on its own side of the boundary.

#### ARTICLE III.

It is agreed that, in addition to the uses, obstructions, and diversions heretofore permitted or hereafter provided for by special agreement between the parties hereto, no further or other uses or obstructions or diversions, whether temporary or permanent, of boundary waters on either side of the line, affecting the natural level or flow of boundary waters on the other side of the line, shall be made except by authority of the United States or the Dominion of Canada within their respective jurisdictions and with the approval, as hereinafter provided, of a joint commission, to be known as the International Joint Commission.

The foregoing provisions are not intended to limit or interfere with the existing rights of the Government of the United States on the one side and the Government of the Dominion of Canada on the other, to undertake and carry on governmental works in boundary waters for the deepening of channels, the construction of breakwaters, the improvement of harbors, and other governmental works for the benefit of commerce and navigation, provided that such works are wholly on its own side of the line and do not materially affect the level or flow of the boundary waters on the other, nor are such provisions intended to interfere with the ordinary use of such waters for domestic and sanitary purposes.

#### ARTICLE IV.

The high contracting parties agree that, except in cases provided for by special agreement between them, they will not permit the construction or maintenance on their respective sides of the boundary of any remedial or protective works or any dams or other obstructions in waters flowing from boundary waters or in waters at a lower level than the boundary in rivers flowing across the boundary, the effect of which is to raise the natural level of waters on the other side of the boundary unless the construction or maintenance thereof is approved by the aforesaid International Joint Commission.

It is further agreed that the waters herein defined as boundary waters and waters flowing across the boundary shall not be polluted on either side to the injury of health or property on the other.

#### ARTICLE V.

The high contracting parties agree that it is expedient to limit the diversion of waters from the Niagara River so that the level of Lake Erie and the flow of the stream shall not be appreciably affected. It is the desire of both parties to accomplish this object with the least possible injury to investments which have already been made in the construction of power plants on the United States side of the river under grants of authority from the State of New York, and on the Canadian side of the river under licenses authorized by the Dominion of Canada and the Province of Ontario.

So long as this treaty shall remain in force no diversion of the waters of the Niagara River above the Falls from the natural course and stream thereof shall be permitted except for the purposes and to the extent hereinafter provided.

The United States may authorize and permit the diversion within the State of New York of the waters of said river above the Falls of Niagara, for power purposes, not exceeding in the aggregate a daily diversion at the rate of twenty thousand cubic feet of water per second.

The United Kingdom, by the Dominion of Canada, or the Province of Ontario, may authorize and permit the diversion within the Province of Ontario of the waters of said river above the Falls of Niagara, for power purposes, not exceeding in the aggregate a daily diversion at the rate of thirty-six thousand cubic feet of water per second.

The prohibitions of this article shall not apply to the diversion of water for sanitary or domestic purposes, or for the service of canals for the purposes of navigation.

#### ARTICLE VI.

The high contracting parties agree that the Saint Mary and Milk Rivers and their tributaries (in the State of Montana and the Provinces of Alberta and Saskatchewan) are to be treated as one stream for the purposes of irrigation and power, and the waters thereof shall be apportioned equally between the two countries, but in making such equal apportionment, more than half may be taken from one river and less than half from the other by either country so as to afford a more beneficial use to each. It is further agreed that in the division of such waters during the irrigation season, between the first of April and thirty-first of October, inclusive, annually, the United States is entitled to a prior appropriation of five hundred cubic feet per second of the waters of the Milk River, or so much of such amount as constitutes three-fourths of its natural flow, and that Canada is entitled to a prior appropriation of five hundred cubic feet per second of the flow of Saint Mary River, or so much of such amount as constitutes three-fourths of its natural flow.

The channel of the Milk River in Canada may be used at the convenience of the United States for the conveyance, while passing through Canadian territory, of waters diverted from the Saint Mary River. The provisions of Article II of this treaty shall apply to any injury resulting to property in Canada from the conveyance of such waters through the Milk River.

The measurement and apportionment of the water to be used by each country shall from time to time be made jointly by the properly constituted reclamation officers of the United States and the properly constituted irrigation officers of His Majesty under the direction of the International Joint Commission.

#### ARTICLE VII.

The high contracting parties agree to establish and maintain an International Joint Commission of the United States and Canada composed of six commissioners, three on the part of the United States appointed by the President thereof, and three on the part of the United Kingdom appointed by His Majesty on the recommendation of the Governor in Council of the Dominion of Canada.

#### ARTICLE VIII.

This International Joint Commission shall have jurisdiction over and shall pass upon all cases involving the use or obstruction or diversion of the waters with respect to which, under Articles III and IV of this treaty, the approval of this commission is required, and in passing upon such cases the commission shall be governed by the following rules or principles which are adopted by the high contracting parties for this purpose:

The high contracting parties shall have, each on its own side of the boundary, equal and similar rights in the use of the waters hereinbefore defined as boundary waters.

The following order of precedence shall be observed among the various uses enumerated hereinafter for these waters, and no use shall be permitted which tends materially to conflict with or restrain any other use which is given preference over it in this order of precedence:

First. Uses for domestic and sanitary purposes.

Second. Uses for navigation, including the service of canals for the purposes of navigation.

Third. Uses for power and for irrigation purposes.

The foregoing provisions shall not apply to or disturb any existing uses of boundary waters on either side of the boundary.

The requirement for an equal division may, in the discretion of the commission, be suspended in cases of temporary diversions along boundary waters at points where such equal division can not be made advantageously on account of local conditions and where such diversion does not diminish elsewhere the amount available for use on the other side.

The commission in its discretion may make its approval in any case conditional upon the construction of remedial or protective works to compensate so far as possible for the particular use or diversion proposed, and in such cases may require that suitable and adequate provision, approved by the commission,

be made for the protection and indemnity against injury of any interests on either side of the boundary.

In cases involving the elevation of the natural level of waters on either side of the line as a result of the construction or maintenance on the other side of remedial or protective works or dams or other obstructions in boundary waters or in waters flowing therefrom or in waters below the boundary in rivers flowing across the boundary, the commission shall require, as a condition of its approval thereof, that suitable and adequate provision, approved by it, be made for the protection and indemnity of all interests on the other side of the line which may be injured thereby.

The majority of the commissioners shall have power to render a decision. In case the commission is evenly divided upon any question or matter presented to it for decision, separate reports shall be made by the commissioners on each side to their own Government. The high contracting parties shall thereupon endeavor to agree upon an adjustment of the question or matter of difference, and if an agreement is reached between them it shall be reduced to writing in the form of a protocol, and shall be communicated to the commissioners, who shall take such further proceedings as may be necessary to carry out such agreement.

#### ARTICLE IX.

The high contracting parties further agree that any other questions or matters of difference arising between them involving the rights, obligations, or interests of either in relation to the other or to the inhabitants of the other, along the common frontier between the United States and the Dominion of Canada, shall be referred from time to time to the international joint commission for examination and report, whenever either the Government of the United States or the Government of the Dominion of Canada shall request that such questions or matters of difference be so referred.

The international joint commission is authorized in each case so referred to examine into and report upon the facts and circumstances of the particular questions and matters referred, together with such conclusions and recommendations as may be appropriate, subject, however, to any restrictions or exceptions which may be imposed with respect thereto by the terms of the reference.

Such reports of the commissions shall not be regarded as decisions of the questions or matters so submitted either on the facts or the law, and shall in no way have the character of an arbitral award.

The commission shall make a joint report to both Governments in all cases in which all or a majority of the commissioners agree, and in case of disagreement the minority may make a joint report to both Governments or separate reports to their respective Governments.

In case the commission is evenly divided upon any question or matter referred to it for report, separate reports shall be made by the commissioners on each side to their own Government.

#### ARTICLE X.

Any questions or matters of difference arising between the high contracting parties involving the rights, obligations, or interests of the United States or of the Dominion of Canada either in relation to each other or to their respective inhabitants, may be referred for decision to the international joint commission by the consent of the two parties, it being understood that on the part of the United States any such action will be by and with the advice and consent of the Senate, and on the part of His Majesty's Government with the consent of the Governor General in Council. In each case so referred the said commission is authorized to examine into and report upon the facts and circumstances of the particular questions and matters referred, together with such conclusions and recommendations as may be appropriate, subject, however, to any restrictions or exceptions which may be imposed with respect thereto by the terms of the reference.

A majority of the said commission shall have power to render a decision or finding upon any of the questions or matters so referred.

If the said commission is equally divided or otherwise unable to render a decision or finding as to any questions or matters so referred, it shall be the duty of the commissioners to make a joint report to both Governments, or separate reports to their respective Governments, showing the different conclusions arrived at with regard to the matters or questions so referred, which questions or matters shall thereupon be referred for decision by the high con-



tracting parties to an umpire chosen in accordance with the procedure prescribed in the fourth, fifth, and sixth paragraphs of Article XLV of The Hague Convention for the pacific settlement of international disputes, dated October eighteenth, nineteen hundred and seven. Such umpire shall have power to render a final decision with respect to those matters and questions so referred on which the commission failed.

#### ARTICLE XI.

A duplicate original of all decisions rendered and joint reports made by the commission shall be transmitted to and filed with the Secretary of State of the United States and the Governor General of the Dominion of Canada, and to them shall be addressed all communications of the commissions.

#### ARTICLE XII.

The international joint commission shall meet and organize at Washington promptly after the members thereof are appointed, and when organized the commission may fix such times and places for its meetings as may be necessary, subject at all times to special call or direction by the two Governments. Each commissioner, upon the first joint meeting of the commission after his appointment, shall, before proceeding with the work of the commission, make and subscribe a solemn declaration in writing that he will faithfully and impartially perform the duties imposed upon him under this treaty, and such declaration shall be entered on the records of the proceedings of the commission.

The United States and Canadian sections of the commission may each appoint a secretary, and these shall act as joint secretaries of the commission at its joint sessions, and the commission may employ engineers and clerical assistants from time to time as it may deem advisable. The salaries and personal expenses of the commission and of the secretaries shall be paid by their respective Governments, and all reasonable and necessary joint expenses of the commission incurred by it shall be paid in equal moieties by the high contracting parties.

The commission shall have power to administer oaths to witnesses, and to take evidence on oath whenever deemed necessary in any proceeding, or inquiry, or matter within its jurisdiction under this treaty, and all parties interested therein shall be given convenient opportunity to be heard, and the high contracting parties agree to adopt such legislation as may be appropriate and necessary to give the commission the powers above mentioned on each side of the boundary, and to provide for the issue of subpoenas and for compelling the attendance of witnesses in proceedings before the commission. The commission may adopt such rules of procedure as shall be in accordance with justice and equity and may make such examination in person and through agents or employees as may be deemed advisable.

#### ARTICLE XIII.

In all cases where special agreements between the high contracting parties hereto are referred to in the foregoing articles, such agreements are understood and intended to include not only direct agreements between the high contracting parties, but also any mutual arrangement between the United States and the Dominion of Canada expressed by concurrent or reciprocal legislation on the part of Congress and the Parliament of the Dominion.

#### ARTICLE XIV.

The present treaty shall be ratified by the President of the United States of America, by and with the advice and consent of the Senate thereof, and by His Britannic Majesty. The ratifications shall be exchanged at Washington as soon as possible and the treaty shall take effect on the date of the exchange of its ratifications. It shall remain in force for five years, dating from the day of exchange of ratifications, and thereafter until terminated by twelve month's written notice given by either high contracting party to the other.

In faith whereof the respective plenipotentiaries have signed this treaty in duplicate and have hereunto affixed their seals.

Done at Washington the eleventh day of January, in the year of our Lord nineteen hundred and nine.

(Signed)	ELIHU ROOT.	[SEAL.]
(Signed)	JAMES BRYCE.	[SEAL.]

And whereas the Senate of the United States by their resolution of March third, nineteen hundred and nine (two-thirds of the Senators present concurring therein), did advise and consent to the ratification of the said treaty with the following understanding to wit:

*Resolved further (as a part of this ratification),* That the United States approves this treaty with the understanding that nothing in this treaty shall be construed as affecting or changing any existing territorial or riparian rights in the water, or rights of the owners of lands under water, on either side of the international boundary at the rapids of the Saint Marys River at Sault Sainte Marie, in the use of the waters flowing over such lands, subject to the requirements of navigation in boundary waters, and of navigation canals, and without prejudice to the existing right of the United States and Canada, each to use the waters of the Saint Marys River within its own territory; and further, that nothing in this treaty shall be construed to interfere with the drainage of wet, swamp, and overflowed lands into streams flowing into boundary waters, and that this interpretation will be mentioned in the ratification of this treaty as conveying the true meaning of the treaty, and will, in effect, form part of the treaty.

And whereas the said understanding has been accepted by the Government of Great Britain, and the ratifications of the two Governments of the said treaty were exchanged in the city of Washington on the fifth day of May, one thousand nine hundred and ten;

Now, therefore, be it known that I, William Howard Taft, President of the United States of America, have caused the said treaty and the said understanding, as forming a part thereof, to be made public, to the end that the same and every article and clause thereof may be observed and fulfilled with good faith by the United States and the citizens thereof.

In testimony whereof I have hereunto set my hand and caused the seal of the United States to be affixed.

Done at the city of Washington this thirteenth day of May, in the year of our Lord nineteen hundred and ten, and of the independence of the United States of America the one hundred and thirty-fourth.

[SEAL.]

WM. H. TAFT.

By the President:

P. C. KNOX,  
*Secretary of State.*

#### PROTOCOL OF EXCHANGE.

On proceeding to the exchange of the ratifications of the treaty signed at Washington on January eleventh, nineteen hundred and nine, between the United States and Great Britain, relating to boundary waters and questions arising along the boundary between the United States and the Dominion of Canada, the undersigned plenipotentiaries, duly authorized thereto by their respective Governments, hereby declare that nothing in this treaty shall be construed as affecting, or changing, any existing territorial or riparian rights in the water, or rights of the owners of lands under water, on either side of the international boundary at the rapids of the Saint Marys River at Sault Sainte Marie, in the use of the waters flowing over such lands, subject to the requirements of navigation in boundary waters and of navigation canals, and without prejudice to the existing right of the United States and Canada, each to use the waters of the Saint Marys River, within its own territory; and further, that nothing in this treaty shall be construed to interfere with the drainage of wet, swamp, and overflowed lands into streams flowing into boundary waters, and also that this declaration shall be deemed to have equal force and effect as the treaty itself and to form an integral part thereto.

The exchange of ratifications then took place in the usual form.

In witness whereof they have signed the present protocol of exchange and have affixed their seals thereto.

Done at Washington this fifth day of May, nineteen hundred and ten.

PHILANDER C. KNOX. [SEAL.]  
JAMES BRYCE. [SEAL.]

The CHAIRMAN. The committee will now hear from Mr. Driscoll, of Buffalo, N. Y.

Mr. DRISCOLL. I shall not take up more than a minute or two of your time. I realize that you mean to give both bills a great deal of your valuable time. In my judgment, both bills are good bills.

I come from the city of Buffalo, and you all know that the city of Buffalo is located about 22 miles from Niagara Falls; and the people there and in the surrounding country have but two objects in view, and that is to get more power and cheaper power, and I think that they should have cheaper power rates. I listened to my colleague and I think he has made a very fair statement.

Mr. KENDALL. Have the people no concern about the preservation of the Falls?

Mr. DRISCOLL. As far as the preservation of the Falls is concerned, the question before your committee is whether or not the diversion of the 4,400 cubic feet of water per second that is allowed under this treaty, and which is not at present being used, will in any way harm the scenic beauty of Niagara Falls. In my judgment, not in the slightest degree.

The CHAIRMAN. The treaty provides for 56,000 cubic feet per second.

Mr. DRISCOLL. We have no jurisdiction over that. All we have jurisdiction over would be the 15,600 cubic feet per second that is now being used and the 4,400 feet additional that is not being used.

Mr. COOPER. How much would it be in the aggregate?

Mr. DRISCOLL. Twenty thousand on the American side. The limitations that have been placed upon the waters of Niagara River should be released. That is, I do not believe that it was the intention of the law to control the waters below Niagara Falls, where I understand there is a drop of some eighty odd feet. If that water should be used for power purposes in the lower Niagara it would be a great benefit to the people, and it would not impair in any way the scenic beauty of Niagara Falls. I do say, gentlemen, that when your committee present the bill it should, in my judgment, be one so perfect that it would not be necessary for Congress to cross a "t" or dot an "i" in its amendment.

The CHAIRMAN. How can we do that? I wish the gentleman would state. It would be gratifying to us.

Mr. DRISCOLL. I am going to leave that to the chairman and the gentlemen of the committee. I know that it is a very difficult proposition. I fully agree with Mr. Simmons that this is one of the greatest questions that will ever come before this committee affecting power regulation. I believe there should be some law in this country regulating the maximum and minimum cost of power. We have been told that there is 160,000 horsepower coming in from Canada. I can not find any reason why we should not have more power if we have the market to develop it.

Mr. FLOOD. But do you think that the price to the consumer should be limited?

Mr. DRISCOLL. Absolutely. I thank you, gentlemen, very kindly. There are several gentlemen here, including representatives of the chamber of commerce of the city of Buffalo. They have been spending a good deal of time here and I hope they will be heard.

Mr. SIMMONS. I would just like to ask one question. Do you think the public-service commission would safeguard that proposition in the city of New York?

Mr. DRISCOLL. That I can not answer, gentlemen; that is quite another proposition.

The CHAIRMAN. The committee will now hear from Representative Doremus, of Michigan.

**Mr. DOREMUS.** Mr. Chairman and gentlemen of this committee, I think you all understand that perhaps no city is more deeply interested in this question than Detroit. We have pending at the present time a street car settlement that will be voted on by the people next Tuesday. That settlement carries with it the question of embarking in the municipal ownership of street railways. If they decide to operate the street railway system now or at a later period they might be interested in getting this cheaper power. We have in Detroit a municipal lighting plant—

**Mr. LEVY.** What is the distance from Detroit to Niagara?

**Mr. DOREMUS.** I do not know, but I would say, offhand, 300 miles.

**A MEMBER.** Two hundred and twenty-five.

**Mr. DOREMUS.** The constitution of the State of Michigan gives the city the power to engage in private lighting. There again you will see the interest which the people of Detroit have in this proposition. Our manufacturers would like to get cheaper power and the citizens of Detroit would naturally like to get cheaper lighting. Under the Burton Act, as I understand it, it is absolutely impossible for them to get this power from Niagara Falls. A private corporation has a contract at this time for 25,000 horsepower with the hydroelectric commission of Canada, but Mr. Monaghan, who is to appear before this committee, is on his way here now, and he will tell you about that. I understand his train has been delayed, but he will be here some time this forenoon. While we are deeply interested and want to utilize a portion of this power, we are also interested in seeing some sort of regulation over the prices charged the consumers in Detroit. I do not think it should be left in the power of any corporation to exact exorbitant prices from the people of Detroit or any other city. I merely wish to make a suggestion. I think this is a matter over which the Federal Government has exclusive control. Certainly if we have the right to exclude this power from Canada entirely, we have the right to regulate the price; and it occurred to me that it might be a good idea to place this entire matter in the hands of the Interstate Commerce Commission. They could have the same authority over these rates that they exercise over the railroad rates. I think that will be satisfactory to the people of Detroit. So, in brief, we are interested in being in a position to import this power, and also to safeguard the citizens of Detroit who may use it.

**The CHAIRMAN.** As I understand it, the city of Detroit has a municipal lighting plant and a contract with the Ontario Power Co. to furnish power, etc.?

**Mr. BRISTOL.** No; that is the hydroelectric commission. Mr. Monaghan represents that.

**The CHAIRMAN.** And this company intends to sell the power to the city?

**Mr. DOREMUS.** They have a contract to sell 25,000 horsepower, and they intend now to extend the power to Windsor. I am assuming, gentlemen, that the treaty between this country and Great Britain accomplishes the purposes for which it was made and that it does amply protect the scenic beauty of the Falls.

**A MEMBER.** What is the nearest place to Detroit?

**Mr. DOREMUS.** I am not prepared to answer that. I should have mentioned it, Mr. Chairman, but we have no public-service com-

mission in Michigan with power to regulate prices charged the consumers of light and power.

Mr. SHARP. Do you think it would be competent for Congress to confer jurisdiction upon the Interstate Commerce Commission to determine the reasonableness of rates on power transmitted from Canada into this country?

Mr. DOREMUS. I do not think there is any question about it, under our constitutional power, to regulate commerce between the States and foreign countries.

Mr. FLOOD. I notice in the Smith bill a provision that no charge shall be made to individuals or municipalities greater than in Canada. What do you think of that?

Mr. DOREMUS. I do not how that would operate in practice. The object of the Canadian Government is to furnish power from the Falls to Canadian cities at actual cost. Now, if this power is to be used in Detroit through a private corporation it would be entitled to a fair return on the capital invested, which, of course, it could not obtain if required to furnish the power at cost.

Mr. COOPER. Where can we get the specific information?

Mr. DOREMUS. I think from the hydroelectric commission of Canada.

Mr. COOPER. I mean, is there any official document in this country that will give us that information?

Mr. DOREMUS. I do not know.

Mr. FLOOD. You think, then, Mr. Doremus, it will take some more legislation than that indicated in the Smith bill?

Mr. DOREMUS. Why, I judge that ought to be changed in some degree, although I have not given that particular feature much consideration. But I do think there should be some legislation, and the rates should be under the control of the Federal Government.

Mr. CURLEY. I was going to ask you if you could state the difference in prices between the manufacturers of electric light in Detroit and that which would be made in consequence of this lighting scheme?

Mr. DOREMUS. The only thing I can say is what Mr. Monaghan said, that they could furnish it for 20 per cent less than is now charged.

Mr. CURLEY. Would the private operating companies that are now doing the work in Detroit find it advisable to continue it at 20 per cent of the present rate?

Mr. DOREMUS. Well, I do not think that they would be driven out of business.

The CHAIRMAN. The committee will now hear from Mr. George P. Sawyer, chairman of the committee representing the Chamber of Commerce of the city of Buffalo.

Mr. GEORGE P. SAWYER. The chamber of commerce in the city of Buffalo has thought it worth while to send a committee here, consisting of myself and my two colleagues, in order to say to you gentlemen that there is a very exigent demand in the city of Buffalo and in western New York for an increased amount of power. From the time of the Pan American Exposition, 10 years ago, we have called ourselves the "Electrical City." Our plans, our investments, our development, have been based upon the benefit of Niagara Falls power. We now get from the Niagara Falls, through its distributor, an

average of about 160,000 horsepower. Another company only skirts the boundaries of it. Our sovereign neighbor, the city of Lackawanna, where one of the largest steel companies is located, is a large consumer of power and practically a part of the city of Buffalo. There is a consumption by this secondary company of perhaps twenty or thirty thousand horsepower, so that we use, maybe, a hundred thousand horsepower there.

Mr. FLOOD. Who do you get this power from?

Mr. SAWYER. The Niagara, Lockport & Ontario Power Co. distributes to Lockport and the Ontario Power Co. distributes in the city of Buffalo. The Niagara Falls Power Co. is a growing company.

Mr. FLOOD. How much do you get from that?

Mr. SAWYER. The entire amount? I heard some of that comes from Canada; but while gentlemen representing these companies are here they can tell you better than I can. I am speaking now of matters that are well known and which are matters of common knowledge. The Canadian Niagara Power Co. is practically owned by the same people who make up the American Niagara Power Co., and they report in their permit about 150,000 horsepower.

Mr. DIFENDERFER. That is, about 150,000 that they are permitted to bring into this country?

Mr. SAWYER. That is all that this company can bring.

Mr. DIFENDERFER. How much of that is being brought into the United States under the treaty?

Mr. SAWYER. All of it.

Mr. COOPER. Who issues this permit? Is it by virtue of a treaty or a law, or what?

Mr. SAWYER. The treaty has amended the Burton Act; but of course, while I am very anxious not to venture upon subjects that can be better treated by other men—the amount is not strictly limited because the companies have the power—they have limited the power that they can import, but just in what way I do not know. You can get that from the power companies. But we will get about a hundred thousand horsepower if, as Buffalo asks you to do, you give us the treaty—the treaty which is the supreme law of the land—or, we think, should be—and which was negotiated after two years, when every circumstance bearing upon the matter was brought up to a highly skilled and trained body. Since then, by means which seem to me to be unfortunate—but I am not here, gentlemen, to make a speech or to be lengthy; I want to bring my remarks to a close.

On February 16, 1911, the Chamber of Commerce of Buffalo sent a telegram to Senator Root. At that time the act was pending. The telegram stated that the Chamber of Commerce of Buffalo desired most earnestly, the extension of the Burton bill for a further period of five years, and asked for a public hearing at which to present their views, asking his leadership in placing the bill in his hands. This was signed by the president of the chamber of commerce. That was answered by a telegram from Senator Root saying that public hearings were not arranged for, and then another long and very emphatic telegram was sent. This was in February, 1911. I hold in my hands a resolution appointing this committee, and asking, among other things, the increased amount of power.

Now, gentlemen, that fixes my official status; and I can say, without power to represent technically, without any authority except that

covered by the Chamber of Commerce of Buffalo with its 3,500 members, that from Dunkirk to Syracuse, in the middle of the State, this same prayer goes up to you. The street cars in Syracuse are run by Niagara power. Rochester, Auburn, and many other places—a dozen—have their public utilities operated by this power, and they all want more. These two companies—one in Buffalo and one in the immediate vicinity of Buffalo—can take on to-day a new customer who wants more than 2,000 horsepower; but they must reserve that for the man who has taken 20,000 horsepower. As his business increases he must have more and more. We are now at a power famine. This treaty has been negotiated, and yet it has been obstructed, and we have come to pray that it be no longer obstructed.

Mr. DIFENDERFER. Then, your principal concern is that more power be created for the purpose of consumption by people who need it in your city of Buffalo?

Mr. SAWYER. Yes, sir.

Mr. DIFENDERFER. That is your principal contention. Then, if that is true, is it not just as necessary to your people that it should be transmitted more cheaply?

Mr. SAWYER. Just so.

Mr. DIFENDERFER. Then, would it not be better for a commission to regulate that?

Mr. SAWYER. I hesitate to answer that. I am a layman in this matter. I do know that there is nothing so complex or difficult as computations about electrical power. It is not like ale, which you can measure by the drink or pint or quart or by the gallon. There are gentlemen who are producing large amounts of power who say they can produce it just as well by steam. Mr. Frank Henry, of the Washburn Mills, told me the other day that he could make it just as cheaply making it in the city of Buffalo; and yet there are people who can tell you that electrical power does not cost half the amount that steam costs.

Mr. LEVY. I understood you to say that there is a practical power famine?

Mr. SAWYER. Yes, sir.

Mr. LEVY. And that to do justice to the people of Buffalo and vicinity and a large part of New York, it is necessary that the Falls may be made to yield more electric power. Is that so?

Mr. SAWYER. Well, we should import what we can under the treaty; yes, sir.

Mr. LEVY. Yes. Now, then, when that limit is reached there will be large plants, and won't there be another famine?

Mr. SAWYER. Well, sir, that I can not answer.

Mr. LEVY. And then won't there be another famine?

Mr. SHARP. A demand for the abrogation of the treaty?

Mr. SAWYER. Well, the treaty exists. When you come to move as large a party as the United States Government, plus the Government of Great Britain, why, that thing will have to be met by a future generation.

Mr. LEVY. If they should invent a storage battery that is as useful—and that is practically possible—there is no reason why they should not store up power during the night?

Mr. SAWYER. Yes, sir; enough for a generation.

Mr. LEVY. There might be discovered some substitute for electricity, but that is not probable. You say that the people of Buffalo want this on account of the power famine. Now, then, if this is done, the limit will be reached again and there will be another famine?

Mr. SAWYER. Is it not an adequate answer to that question to say that we have a treaty signed by the President, that this treaty was practically unattacked for a length of time, and then this was slipped over on use? We come, seeing that the presumption is in our favor on account of this treaty, and I can not assume the rôle of a prophet as to whether we shall want more.

Mr. DIFENDERFER. Right on the line of Mr. Cooper's question; as I understand it, it is a fact that out of 160,000 horsepower that Canada is permitted to put into this country only 110,000 of it is being used now. If that is true, then there are 50,000 horsepower remaining in Canada that can be used. Why should there be a famine?

Mr. SAWYER. I could answer that, but—

Mr. GARNER. Might I ask you a question? The basis of this treaty was the preservation of the beauty of Niagara Falls?

Mr. SAWYER. Yes, sir.

Mr. GARNER. And thus we are fighting the proposition of permitting a greater amount of power to come from Canada. That is with the presumption that Canada will not use all the power that the treaty now gives; is that not true?

Mr. SHARP. Domestic.

Mr. SAWYER. Why, no; I think that is a matter of information.

Mr. GARNER. I will ask you this question, then: If Congress did not pass laws regulating the importation of power from Canada, you could bring in the full amount that the treaty permits Canada to produce?

Mr. SAWYER. Yes, sir.

Mr. GARNER. And also use the full amount that the treaty permits the United States to utilize?

Mr. SAWYER. Yes, sir.

Mr. GARNER. Now, the only discussion would be to determine whether or not Canada could use that power at present—

Mr. SHARP. Domestic.

Mr. GARNER. All kinds of power; from both Canada and the United States.

Mr. SAWYER. I admit that; I admit that; but we who have been in Buffalo know that the cry about the beauty of the Falls is more neurasthenic than practical. You know that we can go to the Falls day after day and year after year and never see any perceptible difference in the beauty of the Falls. Now, there are other men who can argue that better, but the substance of your question was that there was some invasion on this scenic beauty, and that I deny.

Mr. GARNER. My object is this: In case Congress should extend it 160,000 horsepower, would it not naturally follow that in the course of time manufacturing establishments would be created along the border, where the entire power would be utilized by Canada and the United States would have none?

Mr. SAWYER. Certainly; the water will be abstracted anyway.



Mr. GARNER. As I understand the Representatives who would like to see the scenic beauty preserved, if we prevent a foreign power being imported into the United States it will be years and years—probably a century—before the power will give out?

Mr. SAWYER. Oh, no.

Mr. SMITH, of New York. Mr. Garner, there is one other speaker following who will answer that.

Mr. CURLEY. What is the difference in the prices charged by the two operating companies up there?

Mr. SAWYER. I do not know anything about the price.

Mr. CURLEY. Why, of course you know; you are a member of the chamber of commerce.

Mr. SAWYER. No; I am struggling to fully answer all your questions.

Mr. FLOOD. It seems to me that these companies have divided the territory up.

Mr. SAWYER. Apparently; but that is not true. The greatest difficulty I have is in talking about two things at the same time. All that I know is that there are two companies in Buffalo. Unfortunately, we have certain theoretical gentlemen who have never at any time accomplished any good for themselves or anybody else, but who are abundantly able to run all the civic associations, public-service corporations, banks, and everything else. These gentlemen say that we will be obliged to go outside; that is what sent them, I assume, to Dunkirk, to Auburn, and to Montmorris.

Mr. FLOOD. What sort of a contract did this company in Buffalo make?

Mr. SAWYER. I can not go into that.

Mr. CURLEY. You will agree that it is a very important question?

Mr. SAWYER. Oh, no.

Mr. CURLEY. Then you can withdraw it.

Mr. SAWYER. Yes; but they wanted to specify other things.

Mr. KENDALL. What do they charge for a kilowatt?

Mr. SAWYER. I do not know.

Mr. KENDALL. You are here representing nobody?

Mr. SAWYER. No, sir—

Mr. KENDALL. Are you interested in any of these companies?

Mr. SAWYER. Certainly I am not.

Mr. KENDALL. What do you use in your place—kerosene or gas?

Mr. SAWYER. Gas; natural gas.

Mr. KENDALL. Are you in business in Buffalo?

Mr. SAWYER. Yes, sir.

Mr. KENDALL. Use kerosene?

Mr. SAWYER. I am a director in various companies that use that, but I am not strictly a manufacturer.

Mr. KENDALL. You buy a lead pencil in a store and you know what you pay for it?

Mr. SAWYER. No, sir; I have a stenographer who buys them, and I would go crazy if I tried to know what I paid for everything. [Laughter.]

Mr. CURLEY. I assumed that you were a practical man because you spoke so slightly of the theorists, and as a practical man you should be familiar with the prices charged per kilowatt—

Mr. DIFENDERFER. Will you answer my question?

Mr. SAWYER. Every contract that is made has to be filed with the public service commission. I am a director of a company—I happen to be the president of a company which had to negotiate for a considerable quantity of Niagara power, and we could not do it because I thought we could light our office building cheaper in the old way, and we have been going on and taking care of things. Last month we made a contract for a long term of years with an electric company. I do not know whether we have gotten it more liberally, but I think they have come down. Now, these prices all have to be O. K'd.; every contract that is put on file. The Utilities Commission of the State of New York has been in operation since July 1, 1907. Its decisions and the character of its members has given that commission a standing that is similar to that held by our Supreme Court or even our Court of Appeals. A good many of them are laymen, but some of them are lawyers, and I think that answers the question of price in New York State. I think the complications growing out of any attempt to make the price parallel to that of any other country is likely to be futile, but that is only my opinion about it.

Now, gentlemen, I have one other thing to say from the chamber of commerce, and that is, that we want you members of this committee to come up there as our guests and see the Falls and study them at close hand. Gentlemen, remember that we have been studying this proposition since 1890, when the first electrical installation began, and it is full of pitfalls and full of complications, and a man must be almost superhuman who can handle this as an academic proposition without having the thing before his eyes and mind, to get really the idea.

I have had the honor of conducting to the Niagara Falls the President of the United States and spending a day with him——

Mr. LEGARE. I want to ask you this question: Was not the question of scenic beauty settled by this treaty?

Mr. SAWYER. Certainly.

Mr. LEGARE. Was not the treaty brought about by the endeavor to find out just how much water could be used without affecting the scenic beauty?

Mr. SAWYER. Yes.

Mr. LEGARE. And did not that commission of scientists decide that the amount of water used in the treaty could be used without affecting the scenic beauty and no more?

Mr. SAWYER. Yes.

Mr. LEGARE. And we can use the limit, then, mentioned in the treaty?

Mr. SAWYER. Yes, sir.

Mr. FLOOD. A more important question is the question of the price of this power transmitted from Canada.

Mr. SAWYER. I only want to get my invitation out.

Mr. GARNER. If it is the duty of this committee to go to Buffalo and Niagara Falls for the purpose of seeing the Falls, is not it the duty of the people of the United States to pay the expenses?

Mr. SAWYER. I am not a easuist, but I can not answer your question.

The CHAIRMAN. You have no objection to the members paying their own fares?

Mr. SAWYER. Not the slightest. I have been there on several occasions with the Committee on Rivers and Harbors.

Now, we want you to come to the city of Buffalo, which has a hundred thousand dollars to spend on advertising—

Mr. KENDALL. And entertainment.

Mr. SAWYER. And this would be a very cheap method of coming there. If you don't want to come at our expense, come at your own. It seems to me a needlessly sensitive question—only a matter of two days' banging around in a sleeping car. I think it is almost a senseless objection. We are so confident that you will agree with our position if you will come there and look at the Falls.

Mr. KENDALL. The treaty had its origin out of a general demand that existed in this country and in Canada for the preservation of the scenic beauty of the Falls?

Mr. SAWYER. Yes.

Mr. KENDALL. I think you will agree to that.

Mr. SAWYER. Yes.

Mr. KENDALL. And prior to the negotiation of the treaty the testimony of the most competent experts in this country and in the other country was taken as to the amount of water diversion that could be safely authorized and contemplated the preservation of the Falls?

Mr. SAWYER. I so understand it.

Mr. KENDALL. I think Mr. Root represented this Government and Mr. Bryce the other Government?

The CHAIRMAN. Yes.

Mr. KENDALL. They determined that not more than 36,000 cubic feet of water a second on the Canadian side and 20,000 cubic feet a second on the American side could safely be diverted. What is the equivalent horsepower of a cubic foot of power?

Mr. SAWYER. That depends on the effectiveness of the installation. It takes from 13 to 15, or even to 17.

Mr. FLOOD. It was said before this committee last summer to be 17.

Mr. KENDALL. Taking 15 as the mean, that would mean then that the United States would have the right to create 300 horsepower—

Mr. SAWYER. Fifteen—

The CHAIRMAN. Fifteen times twenty thousand.

Mr. SAWYER. Yes.

Mr. KENDALL. And Canada would have the right to create 36 times 15?

Mr. SAWYER. Yes.

Mr. KENDALL. Now, under the provisions of the Burton law only 160,000 horsepower can be transmitted into the United States?

Mr. SAWYER. Yes.

Mr. KENDALL. How much of that is now being appropriated by people on this side?

Mr. SAWYER. Why don't you let these engineers answer that when they come? I think there is a dead charter over there that is held in a dog-in-the-manger kind of way; but there are gentlemen here who can answer that, so please let me go.

The CHAIRMAN. Mr. Sawyer, there are eminent engineers here who can go into those details. What I would like to have you tell us is what the people of Buffalo want. I am a friend of Buffalo. Tell us what the chamber of commerce and the people of Buffalo want?

Mr. SAWYER. They want more power. They want the limitation removed. They want all the power that will come from forty-four hundred additional cubic feet per second on this side.

The CHAIRMAN. In other words, they want what the treaty gives the United States?

Mr. SAWYER. Yes; any they don't take any hand in the distribution of this forty-four hundred feet. Of course, we want it where we can get it.

Mr. GARNER. We want to thank you for your very kind invitation.

Mr. SAWYER. I do insist that that is open to you at any time.

The CHAIRMAN. The committee will now hear from Gen. William H. Bixby, Chief of the Corps of Engineers of the United States Army.

**REMARKS OF GEN. WILLIAM H. BIXBY, CHIEF OF THE CORPS OF ENGINEERS OF THE UNITED STATES ARMY.**

Gen. BIXBY. Gentlemen, I came here with a little more haste than I expected this morning, because I did not have much notice that I would be called on this morning. I have brought along with me Maj. Ladue, of my office, who has had special charge of this Niagara Falls matter during the past few years in my office; and I have also brought with me Mr. Buell of his office. We have come without any special preparation of figures or specially prepared documents. We can furnish these to you at any time if you will indicate just what you want. Of course, we can state all that we have gone over in the past years; but the most essential features of the engineer's work in the preservation of Niagara Falls are all boiled down in the printed report which you have in front of you.

Mr. DEFENDERFER. What is that printed report which you speak of?

Gen. BIXBY. House Document 246.

Mr. GARDNER. Oh, no; that is not it.

Gen. BIXBY (after examining pamphlet). No; it is a quarto volume about three-quarters of an inch thick.

Mr. DEFENDERFER. It is a Senate document. As printed it is a Senate document, No. 105. Mr. Cooper, you can get it.

Gen. BIXBY. The document that is already printed and distributed is Senate Document No. 105. The other document, which is in proof sheets and in the printer's hands now, is House Document No. 246, this session—they are two separate and distinct documents.

Mr. DEFENDERFER. This House document is later?

Gen. BIXBY. It is running through the press now and will be bound and distributed presently. In this last document we state the exact total effect, so far found, on Lake Erie and on the Niagara River of the diversions up to date; and have made estimates of what the effect will be on these waterways from the total diversions that are being permitted, and they will be accompanied by figures.

Mr. KENDALL. You have reported what the effect will be of the diversion allowed by law?

Gen. BIXBY. Not all of it, but of so much as has been used.

Mr. KENDALL. Then you have reported what, in your opinion, would be the effect—

Gen. BIXBY. We figured what would be the total effect from the total diversions authorized for the American companies.

Mr. GARNER. Are those figures that you can give us now?

Gen. BIXBY. Yes, sir; the effect on the Horseshoe Falls from 26,600 cubic feet per second diversion. That is the authorized diversion on the American side plus the estimated actual diversion on the Canadian side June, 1911.

Mr. GARNER. What is the effect on the Horseshoe Falls?

Gen. BIXBY. Four inches at the American side and 9 inches on the Canadian side of the Horseshoe Falls; and five-eighths of an inch on the American Falls.

Mr. GARNER. It has that effect now?

Gen. BIXBY. Yes, sir; with the present diversion.

Mr. FLOOD. The question we are considering is, What effect it would have on the Falls to divert 4,400 feet more?

Mr. GARNER. What effect it would have on the Canadian Falls, too.

Gen. BIXBY. Well, we get this total of 4 inches at one end and 9 inches at the other end of the Canadian Falls from the 26,000.

Mr. LEGARE. And you get the five-eighths of an inch on the American side?

Gen. BIXBY. Yes, sir; on the American Falls; so that the 4,000 more of flow will hardly be appreciable. Now, the present effect that we get on the Niagara River is about 5 inches at the head of the rapids above the Falls, and the present effect of the total diversion is only about an inch and an eighth on Lake Erie, so that, so far as navigation is concerned, there is no serious injury by any of these diversions, and I should not think them anything serious. The effect on the beauty of the Falls depends largely on what the lowering from 5 to 10 inches will produce in scenic effect. Now, our reports give photographic views at high water, at low water, and at mean water on the Falls, so that anybody can look at these pictures and see how much each portion of the Falls is affected—how the Falls show up.

The CHAIRMAN. And can it be perceived, General?

Gen. BIXBY. Oh, yes; the pictures show the three stages of water.

Mr. GARNER. General, might I ask you whether or not you have estimated the effect it would have to consume the entire water allowance authorized by the treaty on both sides of the Falls?

Gen. BIXBY. We have not figured that out for the total consumption, but it can be figured out roughly from these other figures and there would not be much difference.

Mr. GARNER. In other words, it would not affect navigation?

Gen. BIXBY. Its effect on navigation would be something less than 2 inches on Lake Erie, and of course a fraction of that would back up on Lake Huron.

Mr. KENDALL. What is 26,000 feet per second, general?

Gen. BIXBY. Why, we had the authorized diversion of the United States and the estimated diversion on the Canadian side, and we had taken the actual measurements at different stages as bases, and then figured these diversions to get the mean effects for these places.

Mr. KENDALL. The authorized diversion on the American side is 15,600.

Gen. BIXBY. Not by the treaty. That is 20,000, but at the time when these reports were going through we were working under the Burton Act.

Mr. KENDALL. Of course, the Burton Act does not authorize any larger diversion than is included in the treaty.

Mr. FLOOD. He is talking about—

Gen. BIXBY. They were estimated to be using 11,000 on the Canadian side; we took 26,000 as the total.

Mr. FLOOD. You said to divert the additional 4,400 feet would not hurt the Falls—

Gen. BIXBY. The additional 4,400 would not be noticeable.

Mr. FLOOD. But the difference in the Falls that you can see in the pictures is that due to the low water or to the diversion that has already taken place?

Gen. BIXBY. To both.

Mr. DEFENDERFER. Now, just let me get this into my head. Maybe you understand it, but I do not. Suppose it is low water, it is 10 inches lower than it would have been if there had been no diversion, is it not, at low water?

Mr. LEGARE. If there had been no diversion at all.

Gen. BIXBY. Ten inches lower from what?

Mr. COOPER. If there was no diversion at all, this taking out of 26,000 puts it 10 inches lower than it would have been had there been no diversion.

Gen. BIXBY. The total diversion is figured to produce 4 inches drop in level at the American end and 9 at the Canadian end. That is figured at a mean stage, and it is probable that it would be the same at a low stage, or at the high stage. That is, figuring 15,600 cubic feet on the American side and 11,000 on the Canadian side, making 26,600 total diversion from the Falls. Four thousand four hundred would be about one-sixth of that.

Mr. KENDALL. The computations you have made there were on the assumption that only 26,000 cubic feet were diverted?

Gen. BIXBY. Yes, sir.

Mr. KENDALL. Under this treaty Canada has the right to divert 36,000 cubic feet per second and the United States has the right to divert 20,000?

Gen. BIXBY. Yes.

Mr. KENDALL. Now, suppose that entire diversion should occur?

Gen. BIXBY. Yes. Quite likely we would get double the drop we have at present—about 8 inches on the American end and about 18 inches on the Canadian end.

Mr. KENDALL. That probably would not affect navigation materially?

Gen. BIXBY. No, sir.

Mr. KENDALL. What effect would that have on the scenic beauty of the Falls?

Gen. BIXBY. It would make more than the difference you can see in the photographs, between the mean and low stages.

Mr. COOPER. That does not include the Chicago Drainage Canal?

Gen. BIXBY. No.

Mr. KENDALL. How much is utilized by the Chicago Drainage Canal?

Gen. BIXBY. Well, they have an allowance of between four and five thousand cubic feet from the Secretary of War. They are practically using, I am told, in the neighborhood of 7,000. They built their works for 10,000; and their statement that their canal could carry

10,000 was in their original request for a permit, and this is considered as their limit, and was so treated in the International Waterways Commission reports. Chicago has been requesting the Secretary of War to grant them the privilege of using 14,000, saying the canal can take it. Now the actual consumption of to-day is between five and eight thousand.

A MEMBER. Now, we are utilizing at Niagara 15,000 diversion—practically?

Gen. BIXBY. We have not found that yet. Last year the report of June 30, 1911, showed the total diversion on the American side as being only 13,800 cubic feet a second, and the total diversion on the Canadian side was only 11,010 feet per second.

A MEMBER. Why do we get the figures constantly recurring here—20,000 and 36,000?

Gen. BIXBY. Because that is allowed by the treaty.

A MEMBER. But it is not what is being actually taken?

Gen. BIXBY. No; it is not what is being actually taken.

A MEMBER. Now, take what the Chicago Drainage Canal takes in addition to this 20,000.

Gen. BIXBY. Nobody knows just how much they are entitled to at Chicago. The figures at Niagara are the 20,000 for the United States under the treaty and the 36,000 for Canada, and have nothing to do with Chicago.

A MEMBER. Is it your idea that the 20,000 does not affect the amount taken out for Chicago?

Gen. BIXBY. Why, yes.

Mr. KENDALL. You mean from a treaty standpoint?

Gen. BIXBY. From a treaty standpoint.

The CHAIRMAN. General, there seems to be some confusion as to the figures that you used. I believe you stated that Horseshoe Falls has been lowered about 4 inches on the American side and 9 inches on the Canadian side, and I understand you to say that the American Falls show only about five-eighths of an inch. Is that correct?

Gen. BIXBY. Those are the figures; they are given very carefully in a statement in this printed report that is coming out.

The CHAIRMAN. General, have you made any investigation as to the effect on the lakes?

Gen. BIXBY. The effect follows from one lake to another, but it is diminished in passing from Lake Erie to Lake Huron. If Lake Erie stands higher, so does Lake Huron, but the difference is small if you consider what is backed up.

Mr. COOPER. May I ask you a question? Do you know whether all the water that is now being taken is being taken from the river above the Falls?

Gen. BIXBY. It is taken from different places along the river, up quite a distance.

Mr. COOPER. Would it be possible to secure sufficient power from the lower river? It has been stated that the Falls drop about 82 feet in the distance of about a mile and a half. Do you think it would be possible to change that for commercial purposes?

Gen. BIXBY. Why, I could not judge how much Buffalo wants; but you could get a large power, of course, by putting a dam across the Niagara River at the lower end where it comes into the lake, and so utilize the water that comes from the Falls.

A MEMBER. But that is not on the Falls.

Gen. BIXBY. Down below the Falls.

The CHAIRMAN. Gen. Bixby, Mr. Rome G. Brown would like to ask you a few questions.

Gen. BIXBY. Yes, sir.

Mr. BROWN. Simply for this purpose, having in mind what I remember to have been one or two conclusions of the engineers' report last year, I thought I would ask the General if my conclusions, as to his conclusions, are correct. Is it not true that the surveys made by the United States surveyor show substantially that the entire amount of the diversions at Niagara Falls—those actually made and those authorized—would not have any appreciable effect, any substantial injurious effect, upon the navigation of the Niagara River or Lake Erie?

Gen. BIXBY. Yes, sir.

Mr. BROWN. That, as I understand it, is a conclusion, is it not—that there is no serious injurious effect upon navigation?

Gen. BIXBY. The effect is appreciable. The question is whether its effect on commerce is of serious moment. The difference in level in Lake Erie would be approximately about 2 inches; and with all the commerce that floats upon the lake the question, then, is, What is the value of a difference of 2 inches in a draft of 19 feet?

Mr. BROWN. That is 2 inches at the outlet?

Gen. BIXBY. Yes, sir.

Mr. BROWN. The entire lake?

Gen. BIXBY. Yes; because Lake Erie is supposed to be level.

Mr. BROWN. As I understand you, the diversions made and authorized would not have any substantial effect upon navigation?

Gen. BIXBY. Well, the report says that the effect can not be neglected. Its effect is small because it is only 2 inches.

The CHAIRMAN. General, practically all of this water goes over the Falls, does it not?

Gen. BIXBY. All of the water that is used for power purposes at Niagara River comes down toward the Falls; some of it is taken out and goes around the Falls, and it all goes out of the river into Lake Ontario.

The CHAIRMAN. The water used for power does not go over the Falls, does it?

Gen. BIXBY. The amount that is used for power does not go over the Falls.

The CHAIRMAN. In other words, if the water was not diverted it would go over the Falls?

Gen. BIXBY. Yes, sir.

The CHAIRMAN. That is the point.

Gen. BIXBY. Yes.

The CHAIRMAN. So that so far as the lowering of Lake Erie is concerned—that is immaterial because it would be lower anyway?

Gen. BIXBY. No, no; there is a point in there that does not show up at first sight.

The CHAIRMAN. Tell us just what difference does it make?

A MEMBER. A layman might understand that if you offer a means of outlet the water will go out. If you build a dam across a creek or in a gutter it will flow around; if you put a ditch there it will flow more rapidly.



The CHAIRMAN. That is the proposition I wish you would explain.

Gen. BIXBY. Yes, sir. Now, when the water flows over the crest of the Falls it drops freely and there is not anything to stop it; consequently it falls downward at a greater speed than it has in the Niagara River above the Falls, and the only reason it does not move so fast in the Niagara River above the Falls is because of the friction of the rocks on the bed of the stream, and also because of the particles of water in its own way, so that the water above the crest of the Falls has to go somewhat slower. When it goes over the Falls it goes much more rapidly.

Now, the pumping of water out of the Niagara River for power purposes does take away from that river above the crest of the Falls a certain amount of water and a certain amount of resistance to the water above; so that the water above comes down much more rapidly than if you did not take out the water below. In the same way as if a crowd of people were coming down a staircase; if you have a policeman come along and take away the front third of the people, then the crowd in the rear can move along so much the faster. So that at Niagara Falls the diverting works do the policeman's work of taking the water away more quickly below, and the water above moves faster on account of the diversion; and as it moves faster the level of Lake Erie drops somewhere between 1 and 2 inches.

The CHAIRMAN. I think, General, you have made that clear.

Mr. DIFENDERFER. Moving faster?

Gen. BIXBY. Yes, sir.

Mr. KENDALL. Let Mr. Brown finish his examination; he is still on his feet.

Mr. BROWN. Is it not true, and so stated as a conclusion in your report, that the larger part of the Canadian diversion is below the crest, so that the diversion made by the two companies has no effect whatever upon the waters of Lake Erie?

Gen. BIXBY. As the water approaches the Falls it goes down the rapids over one or two little crests, one or two rapid drops; and on the Canadian side the greater part of the power diversions are between the top of the Falls themselves and the top of the rapids—they are in between the two. The biggest diversion on the Canadian side is down close to the top of the Falls—so far down that it does not produce any appreciable effect on Lake Erie.

Mr. BROWN. The water being taken below the weir point, I suppose the engineers call it?

Gen. BIXBY. Yes, sir.

Mr. BROWN. That would be so small that particular diversion would have no appreciable effect?

Gen. BIXBY. Very much less effect than the other, because it is taken where the water is dropping faster.

Mr. BROWN. Mind you, General, I am not trying to cross-examine you, but I want to bring out certain facts for the benefit of the committee. Is it not true, and so stated by you as a conclusion, that the diversions that are being made, even up to the amounts authorized, have and would have no perceptible or appreciable effect upon the scenic appearance of the American Falls—that which is east of Goat Island?

Gen. BIXBY. We only get, as I explained here, five-eighths of an inch on the American Falls from all the diversion on the American

side, plus the present consumption on the Ontario end; and that is very little.

Mr. BROWN. And the additional diversion of 4,400 feet would be hardly appreciable?

Gen. BIXBY. Hardly be noticed.

Mr. BROWN. Then the conclusion as to the American Falls is that the amount actually diverted, even if the 4,400 feet more were actually diverted—the effect on the scenic appearance of the American Falls is inappreciable—speaking only of the American Falls?

Gen. BIXBY. I think you are right; but I have not absorbed fully the contents of this document.

Mr. BROWN. Neither have I. Then, as to the Canadian side—before I come to the scenic beauty again—you have spoken about the effects on the navigation of Lake Erie. Is it not your conclusion that, so far as the effect on that part of the Niagara River considered as a boundary line is concerned, that the effect of the diversions made, even if extended to the full amount allowed in the treaty, would be negligible?

Gen. BIXBY. I do not think I understand your question. It would not affect—it can not affect the boundary line.

Mr. BROWN. That is my point. On page 13 of Senate Document 105—I understand your conclusion to be that, so far as considering the boundary-line question, it has no effect on the boundary line?

Gen. BIXBY. Yes, sir; that is true; no effect on the boundary line.

Mr. BROWN. Now, then, General, having spoken of the effect on the navigation of Lake Erie, and on the river as an international boundary line, and that even as to scenic beauty there is no effect on the American Falls, may I ask you one or two questions as to the Canadian Falls? [Reading from paper:] “There are on the Canadian side certain falls known as the Horseshoe Falls.” The effect that you have found is something like 4 inches on this side of the Horseshoe and something like 9 on the other side?

A MEMBER. Did you say 3 or 4 and 8 or 9?

Mr. BROWN. Four and nine.

Mr. KENDALL. Of course, that is not on the assumption that 56,000 feet will be diverted, but only that it may be.

Mr. BROWN. This is only preliminary. The effect of this entire diversion in the river shows a difference of 4 inches on the American side of the Horseshoe Falls and 9 inches on the Canadian side. Now, General, is it not true, and so stated in your report as a conclusion—I want to compare that variation of the levels in the river—is it not true, and so reported in your report, that an easterly breeze across Lake Erie—not a hurricane, but a breeze—would make a difference in the level of the overflow of Lake Erie of several feet?

Gen. BIXBY. It will do so.

Mr. BROWN. And would not an ordinary westerly breeze have the effect of temporarily affecting the depth of the water over the Canadian Falls a matter of a foot, or maybe a foot or two?

Gen. BIXBY. It would increase it.

Mr. BROWN. And is it not true that the variations in the levels of Lake Erie may be due to the difference between a strong westerly breeze and an easterly breeze—the variation of 14 feet?

Gen. BIXBY. It has been something like that.

Mr. BROWN. That is, an easterly breeze has been known to raise the level of Lake Erie?

Gen. BIXBY. The easterly breeze raises one end and the westerly raises the other.

Mr. BROWN. Well, it piles it up—may make 14 feet difference?

A MEMBER. Fourteen feet where?

Mr. BROWN. An easterly breeze might pile up the waters 8 feet?

Gen. BIXBY. Somewhere around that.

Mr. BROWN. And at the same time would affect the depth to some extent all over the lake, and at the same time it affects the depth over the Falls?

Mr. KENDALL. These propositions seem so self-evident.

Mr. BROWN. I was only bringing them out to emphasize the effect of natural causes—for comparison.

Mr. COOPER. Now, I ask you to refer to page 15; it is later and, under the ordinary rules of construction in law, ought to represent your later impressions. [Reading from document:] "The Falls are held in trust, etc., from the Canadian side." Is that your conclusion?

Gen. BIXBY. That was the conclusion of the writer of this report.

Mr. COOPER. Who wrote that?

Gen. BIXBY. Maj. Kellen.

Mr. KENDALL. Is he an expert in your department?

Gen. BIXBY. Yes, sir.

Mr. COOPER. I would like to read this on page 15 [reading]: "An earnest consideration of the effects, five to five-tenths inches."

Mr. KENDALL. Canada is likely to divert all under this treaty without our control.

Mr. COOPER. I observe this photograph was taken at a time when tourists are most generally at the Falls—midsummer, July 26. I observe for a long distance there is no water going over there, apparently; and if it is, it is a very straggly, scraggly stream. If that was lower, how much more scraggly would that look?

Gen. BIXBY. If you take away all the water, the Falls will be gone. The question is simple; but where are you going to draw the line as to amount to be taken?

Mr. GARNER. General, I did not know until Mr. Cooper read it into the record that your department was considering the question from the scenic viewpoint. There are four propositions being considered. The first question is, Will Congress take any action to govern the taking of this water or let the treaty stand as the law? The second proposition is, if we do, Shall we permit on the American side more diverting of water than is contemplated under the Burton Act? The third is whether we shall permit power to be transmitted from the Canadian side in excess of what is allowed—160,000 horsepower.

Gen. BIXBY. Well, I should like to take up the questions rather in the inverse order, because I can answer them more quickly in that way. So far as the importation of power is concerned, the Engineer Department has no interest whatever, so far as I am able to discover. I have always considered that it was a question of protection or tariff or both. It has no value to us from an engineering point of view. It is a question that would possibly come up under conservation. If we want to conserve power to the United States, there should not be any objection whatever to importation of electricity; but the United States, through the War Department and Chief of Engineers, has watched that question simply because it was laid

down in the Burton Act, and as somebody had to do it, the Secretary of War did it. Now, we have tried to follow out the conditions of the Burton Act, but it is exceedingly difficult for us to find out how much electricity is generated on the Canadian side, and it is a question of some difficulty to say how much they would send over the Niagara River if there were more cables; and such measurement is a piece of difficult work which the Engineer Department is not specially interested in, but it is willing to do as well as it can at any time if Congress says so. We are willing to do it if Congress so wishes.

As far as the importation of power is concerned, the War Department has no interest one way or the other as to where the electricity goes nor how much of that power is moved in one direction or another, but there is a point about the power that we think somebody ought to look after, and that is, in the interests of conservation, the United States ought to see that so much of the surplus water as is allowed to be diverted should be made to develop all the power that it can give and, therefore, if anybody is going to take water from the Falls to develop power, they ought to use the entire drop of the Falls down to Lake Ontario, because every foot of drop means that much extra power, for if 1 foot gives 1 horsepower, 2 feet will give 2 horsepower, and 10 feet will give 10 horsepower, and so on; and so I think the United States ought to select the individuals who can get the most work out of it. We ought to get some legislation on it somewhere.

MR. KENNELL. I think the legislation in the Burton Act was for the purpose of controlling, as far as it could be done by this Government, the diversion on the Canadian side. If that limitation is advanced or removed, it would to some extent appreciably diminish the scenic appearance of the Falls?

GEN. BIXBY. Well, personally I do not know anything about this except my own personal views; but I do not expect to see but a very few years elapse before Canada will use every bit of water that it can take and the United States will use every bit of water that it can take; and if the Canadians have any trouble in exporting the power from Canada, I do not think it will be more than a few years before they will be using it up at home. I think all this power will be used for electricity, and the place of its use is not the concern of the War Department, nor does it concern navigation.

MR. GARNER. In other words, General, if we pass a law prohibiting that power from being utilized by American citizens, Canada will allow it to be used on the Canadian side?

GEN. BIXBY. Yes, sir.

MR. SHARP. Of course, that is on the assumption that the Canadian Government will not interfere?

GEN. BIXBY. Well, if they can not find capital at home they will use American capital.

MR. SHARP. I mean for the preservation of the Falls?

GEN. BIXBY. Oh, yes.

A MEMBER. You mentioned the fact that this water should be used with greater or more potency to develop power?

GEN. BIXBY. There are plants now on the American side that do not derive as much power as they can from the water used by them. The Niagara Falls Hydraulic & Manufacturing Co. drops its water 205 feet and gets every foot of work out of it. Now, the Canadian

Niagara Co. uses a drop of but 140 feet, the Electrical Development Co. uses a drop of but 135 feet, etc., the Hydraulic Co. and the Ontario Co. get about 200 feet drop out of that water, and some others only get 50.

Mr. GARNER. General, in that connection, your contention is that, in the interests of conservation, the companies taking the power on both sides should be required to get the greatest power out of the water being utilized?

Gen. BIXBY. Exactly.

Mr. GARNER. Now, I can see no way by which the American Congress can control the Canadian side, unless they control the importation of power into the United States. We can not control it unless we say to the Canadian power companies, "You must comply with certain regulations"——

A MEMBER. In utilization of the potency of the water.

Gen. BIXBY. Yes, sir. Well, I presume that some restrictive legislation as that might be found that would have that effect for a few years, but it would not be for long, because even Canada is not going to throw away water power and dollars and cents for many years to come. I know if I had a dollar and one man could get 10 per cent interest out of it and another man 20 and another 40 I would hunt up the man who would give me 40 per cent. Now, we can get from one and one-half to four times as much power out of this water by using the same arrangements as the Niagara Falls Hydraulic Co. and the Ontario Co. are using, and we can get from one and one-half to four times as much business and profit out of it as anybody else using that power like the other companies with from 50 to 135 feet head.

The CHAIRMAN. Gen. Bixby, have you any objection to Richard B. Watrous, secretary of the American Civic Association, asking you a few questions?

Gen. BIXBY. Not at all.

Mr. RICHARD B. WATROUS. The reason I have asked permission to ask a question now is because the General has touched upon the question of using more than the amount of water that is used, and in this report, which is a very admirable report, there is one very pointed statement to the effect that one of the American companies is wasting one-third of the head of the water it is permitted to use.

As I understand it it is permitted to use 8,600 cubic feet, and a third of that would be 2,866 cubic feet. That transferred into power and, using the figures of Congressman Simmons, multiplied by 20, would be 57,320 horsepower. Using the figures which we have been using it would mean 34,392 horsepower. We have listened to the statement to the effect that Buffalo is crying for more water power. Now, the question I desired to ask of Gen. Bixby is whether, when this report was made, this information was obtained from that particular company?

Gen. BIXBY. I understand the company's plant is being changed.

Mr. WATROUS. Are there any late figures on it, General?

Gen. BIXBY. There may be, but I am not posted on the late figures. All I know is that the changes are being made, and my remarks are only aimed at the pure theory of conservation, which it is our bounden duty to get at.

Mr. WATROUS. I understand that, but in this report there is a more definite statement, where the waste of a third is quoted, and that

is recommended to be changed. It seems to me that there is one of the very strongest arguments, because if they would use what they are permitted to use they would supply a great additional demand.

Mr. GARNER. In that connection, may I ask whether or not under the Burton law you had any power to control the power plants?

Gen. BIXBY. The award was laid down for us and we were to watch its execution.

Mr. GARNER. Then you had no power under the Burton Act to control their methods?

Gen. BIXBY. No, sir.

Mr. GARNER. If you had that power you could have forced them to utilize the greatest amount of power?

Gen. BIXBY. Yes, sir; practically.

Mr. BROWN. May I ask the general a question? General, where a company, like the Canadian Niagara Co., takes its water from below the crest of the Falls—we have all seen, I think, that when a company takes it from above the crest the diversion tends to be unfavorable to navigation?

Gen. BIXBY. Yes, sir.

Mr. BROWN. Now, then, the Canadian Niagara Co. takes its water from below the crest?

Gen. BIXBY. Yes, sir.

Mr. BROWN. Therefore, we may find that the use of the lower head preserves navigation. Is that true? I mean, the company that takes water from below the crest would be a company that would not tend to injure navigation?

Gen. BIXBY. The lower down the water is taken the less the injury would be to the navigation interests.

Mr. BROWN. Then, is it not true that the lower the head at which the water is used the less the tendency is to injure navigation?

Gen. BIXBY. That is true in the case you mention.

Mr. DIPENDERFER. Now, General, these companies who are privileged to use this water, if they had consumed all that was in their power to consume, would it not have cheapened electricity? If these companies who are privileged to use this power had used the maximum capacity would it not have given the people a cheaper power? In other words, haven't the laws of supply and demand been defied in this case and the law of monopoly followed?

Gen. BIXBY. Probably if they had used the water at the greater head they would have made their electricity a little cheaper, but that is something I would not ordinarily inquire into.

Mr. SHARP. All these power developments precede the Burton Act?

Gen. BIXBY. They all precede the Burton Act, and the permits were issued with a fair regard to the men who were developing the business.

Mr. LEGARE. General, have you before you the amount of cubic feet that the Canadians are using?

Gen. BIXBY. In June, 1911, the Canadians were using about 11,000 cubic feet.

Mr. SHARP. Twenty-four thousand eight hundred.

Gen. BIXBY. Col. Riché, in charge of the lake survey, made this report.

Mr. COOPER. I observe on page 16 of that report, dated November 30, 1908, reported to the Secretary of War January 30, 1909, a little

less than two months later, and then by the President sent to Congress August 21, 1911—I think that is the day we adjourned—the Secretary of War sent it to the President on that day. Now, General, I observe on August 21—

Gen. BIXBY. On January 21, 1909; sent to the President August 19, 1911.

Mr. COOPER. That is over two years. I observe here on page 16 that there is quite a criticism of the plant there. I have been told by an electrician—I was told by him when I went through the plant—he said at that time that the machinery that was all right three or four years ago had practically become obsolete. Now, there is some very suggestive language on page 16 of this report. There is a statement in regard to the Niagara Falls Co. that would seem to indicate that that plant is not up to date. Is that so?

Gen. BIXBY. I judge so.

Mr. COOPER. They do not get more than two-thirds of what they ought to get?

Gen. BIXBY. Well, if they could have gotten more funds at the start, they could have gotten a bigger development, but they probably went as far as their finances allowed.

The CHAIRMAN. Mr. Edward A. Wickes, president of the Niagara Falls Power Co., desires to make a statement on this point. There being no objection he will proceed.

Mr. EDWARD A. WICKES. When these works were projected our first three dynamos produced more alternating current than was produced in the United States. We solved every problem that was presented to us. The men whose advice we followed were Lord Kelvin, Turrettini, of Geneva; Mr. Unwin, the dean of the Central Institute at London; Mascart, of France; and Coleman Sellers, of America. They were in session for months. The plans that were followed were laid down by them and superintended here by the most eminent body of engineers that we could get. We have made no error, and when I asked some engineers the other way—they came from California—how many managed to avoid trouble they said, "Why, we copied your methods." Now I make this statement, because "bad work" and "bad management" have been suggested. There was never a time when our work halted for one moment for lack of money. We started with \$2,000,000 and we now have \$25,000,000 in it; and every step has been under the best advice. I say this that you might relieve yourselves from asking questions relative to absence of knowledge.

We installed and have maintained our works so as to get the best efficiency, the most head, consistent with full regard for scenic beauty. If we had put our buildings lower down or at the Falls, we could have used a higher head, but, under the advice of the best artists, to avoid marring the scenery at the Falls, we placed our power house and works up river, and carry the water from our wheels by a long underground tunnel—all at extra expense and with loss of head; but both these losses were deliberately incurred so as to protect scenic beauty. To discriminate against us now in the distribution of this proposed increase, because our head is lower than that of another company, is to penalize us for regarding and to reward others for disregarding the very object of this proposed legislation and of the treaty—the preservation of scenic beauty.

Gen. BIXBY. We have in our office no other thought than that mentioned by the last speaker. Even in our last reports all we are talking about is how it might be done with modern appliances and knowledge to get everything that could be gotten out of it.

Mr. COOPER. This officer says "All this is not intended as a criticism." That is all.

Mr. GARNER. General, you have been somewhat diverted.

Mr. SHARP. Mr. Chairman, I move that the committee adjourn. It is evident that we can not conclude this hearing this session.

The CHAIRMAN. Very well; we will now recess until 1 o'clock.

Gen. BIXBY. Mr. Chairman, I think that I can say all that is expected of me in a very few words. One of the other questions asked was whether the 15,600 feet per second should be increased to 20,000 cubic-foot seconds. So far as navigation and scenic beauty are concerned, I do not know of anything in my office that shows that the increase would seriously affect the two; the effect of the diversion of this 4,400 feet around the Falls would be practically inappreciable. The second question was—

Mr. GARNER. Is any legislation necessary under the treaty? For instance, you have just answered that it would not affect navigation or scenic beauty if the full amount under the treaty was taken from the other side.

Gen. BIXBY. Yes, sir. Our understanding in the Engineer Office has been that there is nothing in the Burton Act that would allow the Secretary of War to divide up that 4,400 cubic feet per second. The treaty gives 20,000 cubic feet as a limit, and nobody has been found in our office who is willing to say which company the additional water is coming to; the joint commission says it is not its business, and none of the secretaries will say that the law authorizes him to step in; so nobody has a right to say who shall get it; and any action we would take in the engineer department would be simply to report against anybody taking it.

Mr. GARNER. Then, as I understand you, we must either perpetuate this treaty or give the War Department authority to revoke permits?

Gen. BIXBY. Our office thinks that Congress must say how that 4,400 feet is to be divided and who is going to divide it. Now, as regards the increase from the old amount—up to 20,000 on the American side and 36,000 on the Canadian side—it has at least one good point, and that is that it does fix a limit on the Canadian side, where no limit was before. Whether that 56,000 feet total diversion is going to injure navigation or seriously injure the Falls, is something that our office thinks can be judged from the data which we put into this last report, which is being printed and which is dated in June, 1911, we think that report will give you gentlemen in Congress all the facts so far as they can be put down on paper. One of the photographs shows the contrast between the looks of the Horseshoe Falls on three occasions. At one of them the flow is about 60,000 feet a second greater than it is at the other, and you can see the effect in the difference between the photographs.

The CHAIRMAN. How soon will this last report be printed?

Gen. BIXBY. We are looking for it every day.

Mr. GARNER. Has it been sent to Congress?

Gen. BIXBY. Oh, yes; it has passed the proofreader.



Mr. SMITH of New York. How do you account for a lowering of 9 inches on the Canadian side and 4 inches on the American side?

Gen. BIXBY. It is due to the slope of the bed of the stream and to the way the water is taken out and to the shape of the Falls.

Mr. DIFENDERFER. The Falls are about 4 feet lower on one side?

Gen. BIXBY. Yes, sir; and it is due to the force of the water and the way it is pumped out.

Mr. SMITH of New York. The photographs show an exposure of the crest line of the Horseshoe Falls. You made a suggestion by which the water could be spread out, thereby continuing the scenic beauty of the Falls. I wish you would explain that plan to the committee.

Gen. BIXBY. It is always possible from an engineering point of view, though sometimes expensive, to regulate the flow of water in a rock-bed river like the Niagara River at that point. We could construct sills for that part of the river in such a way as to stop the present rapid retrogression. We could make the water quite uniform. Those things can be done, but they are, of course, very expensive. The best we can do is simply to get a little better appearance out of the Falls with a lesser quantity of water than we are getting to-day by correcting the irregularity of the flow at the borders; but in such matters I always go back to my boyhood days when I went to the Kauterskill Falls. I suppose as a very small boy the Kauterskill looked large. But I went up there some years afterwards, and if I would pay the owners so much they would turn the water on and let me see half as much water as I saw formerly. If I did not pay, they would not turn the water on. So it is simply a question of where you will draw the line between no water-power development and the unaltered Falls, and a full water-power development and no Falls: and only Congress can draw that line with the cooperation of Canada.

The CHAIRMAN. I believe that answers the questions.

Mr. SHARP. Mr. Chairman, I move that the committee rise.

The CHAIRMAN. Just a moment.

Gen. BIXBY. I do not think of anything else that I care to say, except to repeat once more that the Engineer Department, of course, finds a great deal of trouble and worry in supervising the water diversions and the water powers; but we probably have, at the lake survey, as good an organized force as is needed to do the work, and so we can do the work; and while we do not especially want it, we are not especially objecting to it. If Congress says that the War Department should do it, why, we shall expect to go right along doing it, and if the Congress says that the War Department shall not do it, and any joint national commission should be selected to do it, why, the commission will be sad and we will be happy. [Laughter.]

The CHAIRMAN. Gen. Bixby, if you desire to submit, as a part of your remarks, any additional statement, the committee will be glad to have you do it. We hope at the next meeting Maj. Ladue will be here.

Gen. BIXBY. And we would be glad if you would put up these little remarks into some shape so I can look them over.

The CHAIRMAN. That will be done. We are obliged to you, Gen. Bixby.

I will say to those present that to-morrow the committee will be obliged to take up the annual diplomatic and consular appropriation

bill, and hence we will adjourn this hearing until Thursday morning at 10 o'clock.

Whereupon the committee adjourned at 1.15 o'clock p. m. until Thursday morning at 10 o'clock a. m.

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COMMITTEE ON FOREIGN AFFAIRS,  
HOUSE OF REPRESENTATIVES,  
*January 18, 1912.*

**STATEMENT OF ROME G. BROWN, FOR NIAGARA FALLS POWER CO. AND CANADIAN NIAGARA POWER CO.**

The CHAIRMAN. We will hear Mr. Brown this morning. Mr. Brown, will you state your name, your residence, and whom you represent?

Mr. ROME G. BROWN. I am from Minneapolis, Minn. I represent here the Niagara Falls Power Co. and the Canadian Niagara Power Co.

Mr. DIFENDERFER. Of which Mr. Wickes is president?

Mr. BROWN. Of which Mr. Edward A. Wickes is president. Gentlemen, I appreciate the necessity of brevity in statements. I have tried to arrange in as brief a way as possible certain matters for consideration which, I believe, are important for you to have in mind in regard to legislation in carrying out this treaty. In going over my summary I shall be very glad to answer any questions that I am capable of answering, but if you will be patient it may be that I shall anticipate your questions in presenting my statement.

I will say that when I left Minnesota the thermometer was 40 below zero, but since I came down here I have caught a cold, which, like some Congressmen, is not only both reactionary and insurgent, but it is also progressive. [Laughter.]

Gentlemen, the concrete question before you, as I understand it, is what shall be the nature of a legislative act under the treaty of 1909 to take the place of the Burton Act, so called. Now, in making up your minds upon the nature of that act you would have in mind, and wish to have in mind and consider, certain propositions. You would want to have in mind what, if any—I am not stating them now—what, if any, are or may be the legal rights of those who have made investments at the Falls. Even if you did not regard fully their legal rights, at least you would want to consider what, if any, might be the equities of those people who have made their investments.

Mr. DIFENDERFER. Who gave them their legal rights?

Mr. BROWN. I am coming to that; I said "if any." You would also want to consider what rights and equities the people generally in the locality of the Falls and the general public, as represented by the National and State Governments, might have. Now, then, in order to have in mind what are—or, if you would not agree with me what might be claimed to be—the legal rights or the equities of the parties, as well as what might be the equities, rights, and interests of the public, it has seemed to be necessary—it certainly might be helpful—to bring ourselves down to date by a brief summary of what has taken place prior to this time; and let me give you the

summary. I will try not to be prolix, and some of the details of my argument I will hand to the reporter to be inserted as part of my statement.

No one will disagree with me when I say that the important interests that we have to protect here are the interests of the American investors and of the American public, as paramount, from our viewpoint, to the interests of the Canadian side. Now, way back in the nineties there were two interests—and I may say, gentlemen, that the interests of the hydraulic company and the Niagara Co. are not in conflict and not in dispute; their interests are similar. These two interests, prior to the passage of the Burton Act in 1906 and in the nineties, acquired on the shores of the Niagara River and appurtenant to the Falls, certain real estate interests, and they became at that time riparian owners. I am going to be brief. They became riparian owners on the Niagara River at the point of the Falls. Their situation then was this:

The Niagara Co. above the Falls, the hydraulic company below them but above the Falls, and the State of New York at the Falls—all had certain riparian interests under the law. The Niagara Co. acquired by grant from the hydraulic company below them, and from the State of New York at the Falls, the express grant and privilege (and the law is that such riparian rights are severable and can be granted in whole or in part), they acquired the riparian rights to do certain things, to wit, this: To go upon their land above the Falls and construct their works, including tunnels through the hydraulic company's land and through the State's land, and thereby use, that is, divert water sufficient to develop 200,000 horsepower, and to discharge the same below the Falls. Now, then, not only from these granted rights, but from the law of riparian rights, these companies were at that time advised by their counsel (not myself, but I would have told them the same thing) that they had the legal right under the law of the land, under the law of the State of New York, under the law of property right in this country, they had the legal right that could not be disputed or invaded by any man or by any Government, to make their structures and enjoy their rights, subject to this one qualification: That they must see to it that their diversions, whatever they might be, should not be such as unreasonably to interfere with the navigability of the Lakes or of Niagara River; and if they did not cause such interference, then neither the Government of the United States nor of the State of New York had any right or authority to prevent them from going ahead with their improvements and enjoying forever the beneficial use to which they were entitled under their riparian rights.

Mr. SHARP. What, in your judgment, would the vested interests to which you refer—would there be any complaint on their part if the Burton Act was reenacted, rather than if the whole amount were used, as under the treaty?

Mr. BROWN. I would say yes. Their vested-property rights would be interfered with. But I wish to say this: I am not here to argue to you against your right to legislate at all nor to try to cram down your throats what I think the law is. I am only trying to show you the circumstances under which these companies went ahead, and I want you to understand that what I shall urge upon you is to consider the equities of these companies, as they exist, under all the circumstances,

to have proper regard for their rights, at least their equities, in fixing the terms of the proposed statute.

Mr. DIFENDERFER. In a nutshell, then, your contention is that this committee has no right to enact any law?

Mr. BROWN. On that theory I think this committee has no right to enact any law.

Mr. DIFENDERFER. Has Congress, then, any right to pass any law?

Mr. BROWN. I think Congress has a right to pass a law within certain limits.

Mr. DIFENDERFER. That is what the committee would like to hear.

Mr. LEGARE. You may not want to answer my question at this time, but just keep it in mind. Having these vested rights, if Congress should pass a law fixing rates would it not be retroactive?

Mr. BROWN. I was not going to go into the matter of rates until later, but I think it would not properly be called "retroactive." If I understand the essence of your question I would say, in regard to rates, that it would not only be unwise for Congress to attempt to fix rates, but I think that such an attempt would be invalid and ineffectual. That power so far as it exists belongs to the State of New York.

Mr. LEGARE. That answers my question.

Mr. BROWN. I have certain things that I want to follow along and draw conclusions from.

Mr. LEVY. Is it your contention that the riparian owners, by the purchase of the adjacent land, acquired the right to divert any water that they might desire to divert, with the consideration that the interests of navigation should not be interfered with, no matter what became of the Falls?

Mr. BROWN. As purely a question of legal right, yes, sir; no matter what became of the Falls. Now, I am going to put into the record the summary of a 90-page argument on this point.

The CHAIRMAN. The reporter will incorporate it in the record.

Mr. BROWN. I want this printed as my summary of the law at this point:

LAW AS TO RIPARIAN RIGHTS—LIMITATIONS OF FEDERAL CONTROL—LIMITATIONS OF STATE CONTROL—PROPOSITIONS STATED AND LEADING CASES CITED.

*Rules of law as to Federal control.*

1. That the authority for Federal control of fresh navigable streams and waters in the United States, which at the same time defines and limits such control, arises solely from that power which has been expressly reserved to the United States by the Federal Constitution—the power to regulate commerce between the several States and foreign nations.

2. That this power of control was expressly reserved to the Federal Government by the States originally adopting the Federal Constitution and by all States since admitted under that Constitution; and, subject to this specific power so reserved in the Federal Government, there has passed over to those States, upon their entry into the Union, all powers and interest, whether of ownership or of control, now or formerly belonging to the Federal Government, in the beds and waters of such navigable streams, and the Federal Government has since retained, and still retains, either as against any claim by a State or by an individual riparian, or both, only the specific paramount right of control for the specific and limited purpose of commerce—that is, of navigation. Moreover, this Federal power of control is purely a sovereign power of control for a specified public use, and does not include, and can not be extended to, any element of a proprietary right or interest.

3. That, subject to this purely sovereign right of control of navigation, all right, title, and interest, sovereign and proprietary, belongs to the States or to individual riparian owners, or both; and it is not within the Federal authority or power, either judicial or legislative, to fix or determine, as between a State and an individual owner, the limitations between State and individual ownership or control of water powers. The rights and obligations, as between a State and an individual owner, are fixed by the law of property as established by the decisions of the State supreme court in the State in question. This law of property, as so fixed in any State, is, as to streams in that State, binding upon the Federal Government and its Supreme Court.

*Rules of law as to State control and as to vested property rights of riparian owners.*

1. The title and power of control by the State over the beds and waters of navigable streams are not in any degree proprietary in nature or extent. They are limited to a holding in trust as a sovereign for the specific purpose of protecting a public use, to wit, navigation and certain allied public uses.

2. The title and the power of the State are subject only to the Federal paramount power of control as established and defined as above demonstrated. They are limited also by the private proprietary right of the riparian as fixed by the law of the State.

3. The private riparian owner owns and retains all and the only proprietary title, right, and interest, either to the beds and waters of such streams or to the usufruct thereof. He has the proprietary right to the beneficial use of the flow of the waters in connection with the natural head and fall upon or opposite his riparian land and to the whole thereof; he has a proprietary right to utilize the bed and waters for the development of power and for the operation of water-power plants. This right belongs to him *jure natura*—that is, because it is a natural resource and right belonging to and appurtenant to his riparian land and a part thereof. And this private proprietary right is subject only to the sovereign right of control by the Federal and State Governments for the public use of navigation.

4. As between the State and the riparian owner, the sovereign power of control of the former ends where the proprietary right of the latter begins; and the private right exists up to the point beyond which it would be inconsistent with the specific and limited public right. This private proprietary right of the riparian is the same, whether the title to the bed of the stream, either below high water or below low-water mark, is said to be held by the State or by the riparian. The attempted distinction between the riparian rights, on the basis of the riparian's having a mere easement instead of a title, is, so far as these questions are concerned, purely speculative.

The above rules of law are established by the following leading cases:

*Water Power Co. v. Water Board* (168 U. S., 358-365); *Hobart v. Hall* (174 Fed. Rep., 433); *Hall v. Hobart* (108 C. C. A. Rep., 348); *United States v. Chandler-Dunbar Co.* (209 U. S., 447); *People v. Mould* (37 App. Div., 35, 39); *People ex rel. Niagara Falls Hydraulic P. & M. Co. v. Smith* (70 App. Div., 543; affirmed, 175 N. Y., 469); *Niagara County I. & W. S. Co. v. College Heights L. Co.* (111 App. Div., 770, 772); *Sweet v. City of Syracuse* (129 N. Y., 335); *Smith v. Rochester* (92 N. Y., 474); *Rumsey v. Rd. Co.* (133 N. Y., 79); *Brookhaven v. Smith* (188 N. Y., 74).

See also decision of Wisconsin Supreme Court (Jan. 30, 1912) in *State ex rel. Wassau Ry. Co. v. Bancroft* (Atty. Gen., 134 N. W. Rep., 330).

Mr. BROWN. The *Chandler-Dunbar* case (209 U. S.) and the New York case of *People v. Smith* (70 App. Div.), above cited, expressly hold that the rules of law above stated apply as well to international-boundary streams as to other streams; and the case of *People v. Smith* expressly holds the riparian rights on the Niagara River at the Falls to be as above stated. These rules of property rights were relied upon by the owners of the power plants at Niagara Falls when they made their original investments and constructed their works with the capacities which have since been maintained.

Such is a summary of the law upon this subject; and it is so well settled that these rules of law are now recognized not only by the

Federal Supreme Court but by the highest courts of every State in which the common-law principles of riparian rights are recognized. This includes substantially all the States lying in whole or in part east of the Mississippi River. It does not include those far western States which never had any law of riparian rights, but where the law of prior occupation or prior appropriation prevails, such as Colorado. Cases from such States are not authority in either Minnesota or New York. The Federal courts recognize and enforce the law of property rights on these questions according as they find the local law to have been established by the courts of the respective States; and the United States Supreme Court has so expressly held in 168 U. S., 358, and other cases. So the Federal court would enforce riparian rights at Niagara Falls as such rights have been established by the New York courts. In passing I would say that the same rules of law prevail in Canada, the only difference between the two countries being that here vested property rights are, through the courts, protected under the Constitution against encroachments by the legislature of either the State or the Nation, while in Canada the Parliament can not be so restrained.

The right that Congress has—now, gentlemen, I talked about this matter before the National Waterways Commission the other day, and one of the gentlemen said: "That is merely your theory, isn't it, Mr. Brown?" So much the less merely my theory, it is the statement of the law that has been made by the United States Supreme Court, and the courts have had this decision before them for years. I demonstrate this proposition as a rule of law, to wit: That the power that the Federal Government has over navigable streams is for the specific purpose of navigation; it gets that power expressly from the clause in the Constitution of the United States giving Congress the power to regulate commerce. It does not own the waters; it does not own the bed; it has no proprietary interests; it has only a right of control in its sovereign capacity for a limited and specific purpose, to wit, for navigation. It is a power simply to prevent unreasonable interference with navigation. That is the law.

Now, then, every bit of interest in or power over these streams and their beds, except this limited right of the Federal Government (this is not my statement; it is the statement of the United States Supreme Court—168 U. S., 385), has passed to and is retained by either the State or individuals, or both, as the case may be; it all belongs to one or the other; and if you want to find where the right of the State, New York, for instance, and the rights of the riparian owners begin and end the Federal Supreme Court says you shall go to the law of property rights of the State as shown by the State decisions. The Federal Government having reserved only the paramount power to control navigation, everything else has gone either to the State or to the riparian owners; and in the determination of how that which is left is or shall be divided between the two neither the Federal Government nor the Federal Supreme Court has anything to say.

Consequently, we have this situation; that if we want to find out what the riparian rights are in New York we go to the New York decisions. Under the law the Federal Government has no more to do with "scenic beauty" than it has to do with the color of my hair.

Mr. DIFENDERFER. You haven't any.

Mr. BROWN. That's right—neither hair nor scenic beauty.  
[Laughter.]

Mr. LEVY. Aside from this proposition of navigability, do you think it is affected as a boundary stream?

Mr. BROWN. That is incidental. There is one thing that is certain: If a thing can not affect the navigability of a stream it can not affect the matter of boundary. The matter of boundary is not the question of there being water or there not being water. When the stream as such is the boundary, there international laws fixes the boundary at the thalweg, that is, the deep-water line, but in this case at Niagara Falls it is fixed at a certain line surveyed and described as any line. Suppose the river dried up, is not the boundary there just the same?

Mr. FLOOD. Would not the Government have a right of control over it as a matter of public defense?

Mr. BROWN. If so, then only to the extent that might be reasonably necessary for that purpose.

Mr. LEVY. Mr. Chairman, following up my question: If it should dry up it would still be a boundary, but do you think if Canada or the United States had no treaty as to how much power could be diverted and used—suppose that the United States or the State of New York should give to some power company the absolute right to divert the whole stream over there, don't you think it might bring up the discussion of rights?

Mr. BROWN. It probably would—the question of private rights, international rights, and the right of the United States or New York to attempt such a grant.

Mr. DIFENDERFER. How long have you been the attorney for the companies you are representing here to-day?

Mr. BROWN. I will tell you frankly that as a direct attorney for these companies the first work I did was last fall; but that is not the only experience I have had in these questions.

Mr. DIFENDERFER. I would like to ask you why this question was not brought up in 1906?

Mr. BROWN. Let me say this: It was brought up, and you will read in the report of those hearings much mention of this subject; in the mass of other matter, however, this question was too much lost sight of.

Mr. KENDALL. Then, you hold that if your company was deprived of the right to use that power, if there was any power to deprive you of that right, you could hold that power responsible?

Mr. BROWN. Yes, sir; but we would not have to be compensated for it until we demanded compensation. We are not here demanding compensation, nor demanding at this time recognition of our full rights of diversion. We ask that, up to the treaty amounts, our rights be respected. Now, that being the law of New York, we find in the decision of the appellate division of the New York courts not only these propositions of law supported generally, but these propositions laid down as to this very river at this very point; which decisions have been affirmed by the New York court of appeals. The principles that I have stated are reaffirmed, confirmed; that these companies—not vaguely some companies—but these companies by name acquired their rights to make these diversions by virtue of their riparian ownership, and that those are vested property rights. The question of their naked fee in the bed only going to high-water

mark does not affect that conclusion, because the State of New York holds, not a proprietary interest in the fee, but only an interest in trust as a sovereign to protect navigation; and subject to that, their rights of uses of the waters in the river are just the same as if their fee extended to the middle; and therefore these owners have these rights subject only to the right of the State of New York and the Federal Government to control navigation; and they hold those rights as vested property rights.

Why, gentlemen, some time ago they had assessed one company in New York on the basis that it got its rights to the beneficial use of the water for power by virtue of its riparian rights and that company said, "No; we don't get this by reason of our riparian rights, but by virtue of a special privilege or franchise from the State, which is not assessable"; but the highest courts of New York (70 App. Div., 543; 175 N. Y., 469) said: "No; you get it solely as a property right. It is part of your riparian rights." Now, gentlemen, the United States Supreme Court, in the case of another international boundary stream, has decided these questions the same way. (Note the Chandler-Dunbar case, on the Sault Ste. Marie, 209 U. S., 447.) These cases are all cited in my summary of the law on this point. Gentlemen, I am not here to pound you upon the law, but simply to tell you what rights these companies relied upon. I say they knew what their riparian rights were. Also, out of abundance of precaution (not that they doubted their rights, but as investors they had to borrow money and doubly satisfy those who financed their enterprise), they got patents and grants from the State of New York, by conveyance and by legislative grants, which not only confirmed them in their riparian rights, which they claimed, but also gave to them such rights in the State Park lands next the Falls as were necessary to allow them to make a diversion by tunnels extending below the Falls. Relying then, gentlemen, upon these riparian rights and upon the rights acquired from the State of New York, these people first had a series of investigations made before they started work.

Mr. GARNER. It is 12 o'clock, and I assume there are a number of gentlemen who want to get away. It is important to be on the floor of the House until we get started. We can get away by 1.30.

The CHAIRMAN. We will let Mr. Brown finish.

Mr. LEGARE. Your companies applied to the Secretary of War for a permit subsequent to the enactment of the Burton law?

Mr. BROWN. I do not know whether they did or not, but—

Mr. LEGARE. Well, you are operating now under a permit?

Mr. BROWN. Under this Burton law. However, the fact that we complied with that law does not change our legal rights.

Mr. LEGARE. And those permits are revocable.

Mr. GARNER. I understand your argument now is based upon the conditions existing before the Burton law was passed?

Mr. BROWN. Yes, sir. The position in which these parties were before the Burton law was passed; and I want to show you that these legal rights, or at least the equities of these companies based upon their legal rights, were intended to be regarded and protected by the treaty of 1909.

But are you going to refuse to consider these equities any less than did the Burton Act? Or any less than did the treaty? Will you refuse, at least, to take into consideration the equities of the in-



vestors at the Falls? Are you going to insist on passing an act that is so inelastic that by its very inelasticity it will prevent the rights or equities of these companies from even being considered by the State of New York or the Secretary of War, or by anybody else who may have the power of distribution of this power?

Mr. GARNER. This is a most interesting argument, because upon the legal rights and equities of these companies depends whether or not we shall determine how much shall be generated from Niagara Falls.

The CHAIRMAN. The committee will now take a recess until 1 o'clock.

Whereupon, at 12 o'clock m., the committee took a recess until 1 o'clock.

#### AFTER RECESS.

The committee met at 1 o'clock p. m.

The CHAIRMAN. You can proceed, Mr. Brown.

Mr. ROME G. BROWN. Gentlemen, to resume, and in order to get the connections: I stated this morning that we were relying upon the law of riparian rights recognized as belonging to people in the situation in which the two American companies were—recognized, not only by the National Supreme Court, but by the legislature and courts of the State of New York, the New York courts being, according to the decisions of our Federal Supreme Court, the courts which fix the rights of the riparian owner.

That law gives to the riparian owner the right to the beneficial use of all the water power, subject only to the right of the State to control for navigation, and all those rights are subject to the paramount right of the Federal Government—not plenary, not unlimited, not to make every prohibition, but, under the Constitution, to control only so far as necessary to prevent unreasonable interference with the navigation of the river.

Let me say here: I have put in for your reference a summary of a 90-page argument on these questions written a month ago. The full argument is too long to incorporate in this record, and I have handed each member of this committee a copy of the complete argument. That argument will convince any lawyer or layman that my conclusions are right.

Relying upon that law of riparian rights and upon those rights which were gotten from the State of New York, including the legislative grant to the Niagara Co., for instance, of the right to divert and use and have the beneficial use of water sufficient to make 200,000 horsepower, the Niagara Co. went ahead to make its construction. This was in the nineties. The Hydraulic Co. afterwards made its construction. Gentlemen, before the Niagara Co. started construction, what further did they do? Now, all this discussion is to show you what was the position of these parties in 1906, when the Burton Act was passed; for you can not very well tell what you want to do with the Burton Act unless you get the situation at that time. Did this company go ahead and construct a 200,000-horsepower plant, disregarding the consideration that they were subject to the rights of navigation? No. I know more particularly about the Niagara Co. than the other company. They

hired outside engineers and made investigations running through four years to determine, so far as experts and engineers could determine, what might be the effect of that development upon navigation, which was really all they had to look out for. But they went further than the law required, and sent for these engineers to tell them what effect it would have upon the scenic beauty of the Falls; and not only that, gentlemen—not only the effect of the diversion of water upon scenic beauty and upon navigability—but also what should be the effect upon the general landscape view; what structures would least mar the beauty of the landscape. They engaged the services of the best engineers and landscape artists in the world—I am speaking now particularly of the Niagara Co.—to determine not only the effect upon the scenic beauty of the diversion of the water itself, but also to determine how best to preserve the scenic beauty of the Falls by making their constructions, their general landscape view, the best to conform with and the least to injure the natural scenic grandeur of the entire locality. They did all that before they turned a shovel of soil.

They found this: That with the Hydraulic Co. using approximately 9,500 cubic feet per second, the plan which they then had in view, and the Niagara Co. using 10,000 cubic feet per second, the navigability of the lake and river would not be affected at all, and the integrity of the river as a boundary stream would not be affected at all. Then the company's engineers, having investigated the question of the effect of the diversion upon scenic beauty, reported, saying:

This would not appreciably affect the appearance of the Falls.

The best landscape artists in the United States, after going over the matter at the request of the Niagara Co., said:

Gentlemen, you have come to us, saying that, whatever your legal rights or legal obligations, you desire to make a structure for the beneficial use of this water power which shall, so far as possible, be compatible with the general scenic grandeur of the Falls. If you put the power house down here, it injures to some extent the landscape. If you improve this way and shorten the head-race or the tailrace, you make your structure so much more injurious to the landscape and scenic beauties; but if you will take your water up from this place, and then from your turbines carry it by a tunnel underground, you will thereby the least possible affect the scenic grandeur of the Falls.

That is what the engineers said. That is what the landscape artists said. What did our people do? Gentlemen, what are the facts? What did our people do? Why, our engineer said:

That is all right. The artists have a great eye for beauty, but they do not consider the sacrifice of water power.

Let me remind you that Mr. McKim and Mr. Millet were afterwards members of the national committee to investigate this very subject. The engineers said:

Here you are going to lose, because you carry the water too far, because you don't put the works down nearer the crest; and because you have done this to preserve scenic beauty you will have to lose some of the head and fall you would otherwise have.

In other words, gentlemen, to cut the story short, in order to take the water around at such a distance from their works, as they were operating above, and discharging below, in order to preserve the scenic grandeur of the Falls, they had to lose use of some of the

available head. And what is the result? That out of a possible head of 190 or 200 feet the Niagara Co. from that time to this spends—wastes, as some say—50 or 60 feet in order to get the water down and around for the sole purpose of preserving scenic beauty; and they have only 140 instead of 190 feet, speaking in round figures.

Why? Because they constructed in a method which at that time was, and ever since has been, the method of operation there which is most consistent with scenic beauty. That is what they did. That is what they were advised, and every single engineering and landscape advice that was given by their engineers and artists has since been confirmed by every investigation of the United States Government survey, which investigations had not then been made.

Under those circumstances they went ahead and made their construction; not to divert water to make their authorized amount 200,000 horsepower, but approximately 100,000 horsepower. The Hydraulic Co. also constructed, not to the full capacity allowed and granted by the State of New York, but with a lesser capacity consistent with preserving scenic beauty. Gentlemen, let me recall right here—I attribute it to a misunderstanding, to a lack of knowledge of the history of this thing—that some person or some member of this committee even, now says—or that even Gen. Bixby says—that if further diversion of water is allowed it should be allowed to the companies in position to get the most horsepower out of every cubic foot of water. Why? When the whole basis of this thing is to preserve scenic beauty? Gentlemen, the Niagara Co. has, mainly for the purpose of protecting scenic beauty, built its plant so that it can only get 140 out of 190 feet available head. You, in legislating to carry out the provisions of a treaty which was entered into solely for the purpose of protecting scenic grandeur are asked to take the water which we say belongs to us, in equity at least if not in law, and distribute it to somebody else who is operating or to somebody else who will construct and operate, comparatively regardless of scenic beauty.

Our very sacrifice for the cause of scenic beauty, our regard for the very thing which was the object of this treaty, is made the basis of discriminating against us and in favor of those who were more selfish and less patriotic than we. Right here note that Gen. Bixby qualifies his statement by saying that his advice for any such discrimination is purely from a technical engineering viewpoint, without reference to the question of scenic beauty. He protests that considering everything, including the equities of the Niagara Falls Power Co., he would not urge any company to be preferred over them. His department in their official report (S. Dec. No. 105, p. 16) says that an allowance to that company to divert an amount sufficient properly to operate their plant to the limit of its present capacity "may be regarded as a simple act of justice." Again, after reviewing the history of the Niagara Falls Power Co. construction, its regard for scenic beauty, and the fact that it had installed to the capacity of 100,000 horsepower (one-half of its right under its grant) and the fact that the 8,600 limit under the Burton Act was not sufficient to run its plant as installed and operated before that act was passed, the same report says (p. 139):

The desirability, as well as the justice, of amending the Burton Act so as to permit the Niagara Falls Power Co. to divert water to the full capacity of its railrace tunnel are plain.

In view of the intimate bearing of this investigation upon the interests of the company, and as an acknowledgment of the helpful cooperation of the company, it is believed to be advisable to furnish the company with a copy of this report and permission to do so is requested.

Under the circumstances stated, the American investors, the Niagara Co. and the Hydraulic Co., prior to 1906 made, completed, and operated their plants—the Niagara Co. to the capacity which has ever since been maintained; the Hydraulic Co. completing its installation, but, as I understand it, not at first operating to the full capacity; but neither of them ever installing or operating to the full amount authorized by their riparian rights and by their grants from the State of New York. The Niagara Co. had regard for scenic beauty. The question of scenic beauty having then been solved by their engineers, has also since been solved in the same way by the Government engineers.

Then, after they had done that, somebody, along in 1904 or 1905, spread an epidemic of agitation throughout the country, and the result was an injustice. It was an agitation that was based entirely upon disregard of the law, on ignorance and disregard of the facts, and let me say, in some quarters, on misstatement of facts. The result was that there came a feeling in Congress that scenic grandeur was in danger and that further diversions should be restrained. Therefore, the Burton Act was passed, and it was passed upon this basis—as shown, not only in its terms, but also in the proceedings that led up to its passage—that these people upon the American side, having made these investments; under the circumstances I have stated, their rights, at least to a certain extent, gentlemen, should be regarded first.

With this explanation, gentlemen, I appeal to you. The people, through you as their representatives, are supposed to have a regard for property rights and for investments made in reliance upon property rights. Upon the Canadian side investments were made, and there was an arrangement made upon the Canadian side with these different companies of which the substantial effect was, that half of the power that was produced upon that side should be reserved for use in Canada. The installations that had been made on the Canadian side did not exceed the amount of 36,000, as fixed by the treaty later, but they were planned for about that amount. Just before the Burton Act was passed these facts were found: That on the American side the plant of the Niagara Co. had been installed with a capacity of about 10,000 cubic feet per second, but at one particular time it was found that that particular company was getting along with about 8,600 cubic feet per second. It was found that that 8,600 cubic feet per second, assuming the use to have been an average use, with other amounts then actually used, made up 15,600, and that with those amounts they could probably run along for a year or two. So the Burton Act fixed 15,600 as a total limit and 8,600 as the limit for any one consumer. It was also thought that if too wide permission for transmission to this side was given to Canada it would encourage diversions on the Canadian side, and that, therefore, that would have to be restricted, and thereby further help scenic beauty. They made the restriction of importation 160,000 horsepower, which is equivalent to the use of about 10,000 cubic feet a second. The Burton Act provided for the negotiation of the treaty. That act of

1906 was intended only as a *modus vivendi* until all questions could be investigated and settled by the Government engineers and a treaty negotiated fixing the limits of diversion, not temporarily on the basis of rough estimate, but permanently on the basis of demonstration. The Burton Act was the best guess that could be made at the time it was passed. Its effect, however, was that what should have been 20,000 was made 15,600 (the total diversion on this side) and what should have been 10,000 was made 8,600 (the limit to one consumer). The companies submitted, at a loss, but because it was supposed to be temporary. The United States engineer tells you that both of these companies have observed the limits and obeyed that act right along although it took four years before the treaty was promulgated. Every single finding of the engineers and of the landscape artists of this company, upon the basis of which they had constructed their works, was found by the Government engineers and artists to be right; that with the total diversion of 20,000 feet there was no effect upon navigation or upon the river as a boundary stream, and that there was no appreciable injury to scenic grandeur. Upon the basis of those facts so found, the two countries—Senator Elihu Root acting for this country and Ambassador Bryce for Great Britain—made the treaty of 1909.

What did the treaty do? The very purpose of the treaty was to promote scenic grandeur. It says (Art. V):

It is the desire of both parties to accomplish this object with the least possible injury to investments which have already been made in the construction of power plants on the United States side of the river under grants of authority from the State of New York or on the Canadian side of the river under license authorized by the Dominion of Canada and the Province of Ontario.

The "object" was the limitation of the diversion of waters to protect scenic grandeur. The representatives of these two nations found upon investigation these facts to be true: That under all the circumstances the total diversion of 56,000 cubic feet per second was not too large—that that amount, under all the circumstances, considering the amount that was being taken by the Chicago Drainage Canal Co., was about the proper amount. They further found that the two users upon the American side who had made their investments should have at least 20,000 cubic feet per second—that is, 10,000 for the Niagara Co., 9,500 for the Hydraulic Co., and 500 for another company.

Mr. GARNER. Who gave them that assurance?

Mr. BROWN. It was given them by the facts reported by the Government engineers and International Waterways Commission. It was also found that the hydraulic company had brought their plant up to the contemplated capacity and that in order to operate it on an economical basis it would require about 9,500 cubic feet. You take the 6,500 that the hydraulic company had had under the Burton Act and add 3,000 to that and it makes 9,500. You take the 8,600 allowed the Niagara company under the Burton Act and add to it to the 1,400 and it makes 10,000; there is just the difference between the 15,600 in the Burton Act and the treaty amount of 20,000. That was one of the main considerations of making it 20,000 on this side. It was the main consideration of fixing it down as low as 20,000, because up to that point it was considered that these companies had not only their legal rights, but they had equities. This treaty was made in

1909 and promulgated in 1910. Nobody ever supposed or claimed that the Burton Act was intended as anything more than a temporary measure to govern for the three years necessary to get the information for the basis of a treaty and to make the treaty.

Then after this treaty was made, these companies came in and asked for their rights under the treaty. Several joint resolutions were introduced and amendments were proposed to bring them in line with the treaty, but, on account of a mix-up that always occurs when full hearings are not had, the Burton Act has simply been carried along; and, although the treaty (which was contemplated by the Burton Act to take the place of the temporary provisions of that act) has been made, the Burton Act is still the statute that controls these limitations. As a precautionary measure the Burton Act cast every doubt against the investor. But you now have a treaty made upon investigations which show the results as I have stated; and the proposition now before you is: What sort of a statute are you going to enact to carry out that treaty?

Mr. DIFENDERFER. You have referred to the Hydraulic Power Co. Is that known also as the Schoellkopf Co.?

Mr. BROWN. Yes, sir.

Mr. DIFENDERFER. Is it not true that they have an open canal through which they create their power?

Mr. BROWN. I understand that is true.

Mr. DIFENDERFER. My reason for asking that was to know whether it would add to the scenic beauty of Niagara Falls to have an open canal.

Mr. BROWN. I wish you would discuss that with the Hydraulic people. I represent the Niagara Co. We have no connection or agreement with the Hydraulic Co., but both know the scientific fact that, in order to operate economically under present installations, we need 1,400 cubic feet per second more and they need 3,000 cubic feet per second more. We would have no conflict with them on this question. If you should leave this question to these two companies we would agree.

Mr. DIFENDERFER. No doubt.

Mr. BROWN. Don't make an act so inelastic that although these companies could come together you would have put it out of their power, or of anybody for them, to make a proper division, and exclude the Niagara Co. without even a chance to present its claims.

Mr. GARNER. You speak about the possible inelasticity of the proposed act. Suppose we should go ahead and give you the full power that you are entitled to under the treaty; you would then come in with an additional claim, no doubt, that you had vested interests and could take all the power. What, then, about the inelasticity of the act?

Mr. BROWN. Let me call your attention to that. Our works (speaking for the Niagara company, which is now limited to a diversion of 8,600 feet per second), from a time long before the Burton Act was introduced, have been maintained with their present capacity—a capacity well within our legal and equitable rights. For that capacity 10,000 feet is not a maximum but a moderate amount. We have not, since the Burton Act, increased our capacity for the purpose of creating a use for the extra amount that we ask for.

Gentlemen, we do not ask you to put into this act that we should have control of this 4,400 feet more, nor any part of it, because we say that is a detail which you don't want to go into. On the other hand, while not making it so specific as that, we don't want you to make an act so inelastic that we can not go before a proper tribunal and have our equities, at least, considered.

Mr. GARNER. But would it be elastic if we let the Burton Act pass out of existence and then give you a new act allowing you the use of the entire power?

Mr. BROWN. If the proposed act makes any limitations, then, under the circumstances which have been here shown to exist and which now appear in the United States survey reports, it seems to me that the limitations of the act should be the same as the limitations of the treaty.

Mr. GARNER. It would be inelastic, then, if it were coequal with the terms of the treaty; there would not be any change at all.

Mr. BROWN. I see your point. We don't ask to receive all the extra amount. We want, at least, that we should have a chance to be considered in the distribution. There is no doubt that this extra 4,400 feet should be allowed. Now, then, whether it shall be to some new industry or the Niagara Co. in part or alone or the Hydraulic Co. in part or alone, who shall get it, and in what proportions, I say that question should be left, we will say, for instance, to the Secretary of War to determine, after a hearing. By the express terms of the act he should be allowed to take into consideration the legal rights and the equities of the present investors, whatever he shall find them to be, and also, of course, the interests of the public and all interests. I would like to come down to the question of what the proposed act should provide.

The CHAIRMAN. Come down to the legislation before the committee.

Mr. BROWN. The legislation before you, it seems to me, gentlemen, should, in the first place, add 4,400 feet more, so as to make 20,000 feet the total limit on the American side. That is the first proposition. Why? Because it has been shown by the reports of these surveys and stated to you orally on Tuesday by Gen. Bixby as his conclusion that that would not have any effect upon navigation, nor upon the stream as a boundary line, nor even upon the scenic beauty of the falls. It would have no effect—hardly measurable, much less perceptible, on the American Falls.

Mr. GARNER. Would it be possible for the 4,400 cubic feet extra to become the property or right of any other company besides the two that are now operating?

Mr. BROWN. You ask me my present opinion as a pure matter of law?

Mr. GARNER. Yes.

Mr. BROWN. I say frankly, no. Gentlemen, don't misunderstand me. I am only stating that upon which we depended when we made our investment. I am simply reminding you that we had good ground to believe it; that we acted upon that belief, and that we were right; and upon the strength of that I appeal to your sense of justice to consider our equities.

Mr. GARNER. I only ask for information.

The CHAIRMAN. If this committee should vest the power in the Secretary of War or the Public Service Commission of New York to dispose of this water for power, either one of those agencies can dispose of it to whom it desires?

Mr. BROWN. You mean they would have the legal right to do it—give it all to some one else and ignore us?

The CHAIRMAN. Yes; you can put it that way.

Mr. BROWN. As a matter of law, I don't think they would.

The CHAIRMAN. What would you do if they did?

Mr. BROWN. That I can not tell. I know what I would advise. [Laughter.] One thing is sure. Before the power is allotted I would ask for a hearing, and I would go before the commission of New York, or before the Secretary of War, whichever has the say, and knowing the fact that our equities could be considered, I would rely upon the faith that before we got through we would impress those gentlemen with what is right and fair in the matter.

The CHAIRMAN. Have you considered the fact that the Secretary of War can revoke your permit?

Mr. BROWN. The terms of the act so provide; yes, sir.

Mr. GARNER. Before you go from the other proposition, you made a suggestion as to what the provisions of the bill should be, which would be virtually a direction that your companies be given this additional amount?

Mr. BROWN. Not necessarily.

Mr. GARNER. Yes; but if the bill should provide that they shall take into consideration your legal and equitable rights—if a bill contained that kind of a clause, and if I were Secretary of War, I should feel that Congress directed me to give preference to those rights over those of any newcomers; whereas if you left that out, you could still appeal to this commission or to the Secretary of War in an argument based upon your legal and equitable rights?

Mr. BROWN. You see, I wouldn't appeal to men's favor nor to prejudice; I say again we are not here holding the law over you as a threat. I would say to the authority having the power of disposal, "Here are our rights under the law. It is your duty to consider them. In view of all the circumstances, it is fair that the Niagara Co. should be given 1,400 of this 4,400 feet; the Hydraulic Co. can speak for itself." Instead, for instance, of giving it, in terms, back to the State of New York, who have already in advance given it to us, it is more equitable to leave it open, so we may be considered. If the permit were expressly confined to those utilizing the highest head, they might have to give it to some man who comes up here with a \$35,000,000 proposition (on paper) which is only an in futuro dream, and who says, "Until we get our scheme financed, we want to tie up the use of this extra power and prevent its use by those who have already made investments on the faith that they would be allowed enough to operate at normal capacity."

Mr. GARNER. You could do that very easily, Mr. Brown, if the Secretary of War should direct it as he sees best, because otherwise it would be an expression of Congress as to what its views were in the premises.

Mr. BROWN. In general, I agree with you. Now, the point is this: It is impracticable for Congress to determine in advance the exact limits, conditions, or grantees of these permits; but you can deter-



mine the general policy and leave the details to somebody else, so that a proper and equitable distribution can be made.

Mr. GARNER. And it would be more elastic if we did not compel the Secretary of War to take into consideration the legal and equitable rights—

Mr. BROWN. I beg your pardon; I think I intended to state that the proposed act may be too elastic and that it may be too inelastic. Is it no reflection on Congress that, when it leaves a discretion to a certain department or a certain commission, it shall say to that department or commission: "Not exclusively, but besides other things, you shall, in reaching your conclusion, take into consideration the vested property rights under the law and equities, whatever you shall find them to be." Why, gentlemen, that seems to be doing only what the Burton Act did (although inaccurately) and what this country did (but more accurately) in its convention with Great Britain, each country being represented by its most prominent lawyer and citizen. Why should you now, in an act to give effect to that treaty, be less considerate of equities and property rights than is the treaty itself? Less considerate than even the Burton Act?

Mr. DIFENDERFER. If we were to grant this extra amount of power to two of those companies, wouldn't the Niagara Falls Power Co. be the principal beneficiary, in view of the fact that the Hydraulic Power Co. is very limited in point of production and distribution?

Mr. BROWN. Now, as I understand the situation, there is no member of this committee but knows—and I think we can take Gen. Bixby's word for it—there is no worry that these companies will not have a market for all the power they can get. They need all the extra power allowed under this treaty. Four thousand four hundred more will put us where we can operate our plants economically; 1,400 feet puts the Niagara company in proper condition; 3,000, the hydraulic company.

Mr. LEGARE. Who do I understand fixes the amount of water now being used by each company?

Mr. BROWN. The Secretary of War.

Mr. LEGARE. The Secretary of War fixes how much water you shall use and the other company shall use?

Mr. BROWN. Yes, sir; now, I stated the general conclusions as to the effect upon navigability, upon the river as a boundary stream, and upon the scenic beauty, as stated in the reports, made by this 4,400 feet. I have a short statement from the United States Engineers' Reports (S. Doc. No. 105 and H. Doc. No. 246), which I wish to go into the record at this point.

The CHAIRMAN. Yes; put them in the record.

Mr. BROWN. It is as follows:

#### EFFECT ON NAVIGABLE CAPACITY OF RIVER AND LAKE.

The reports show that the only diversions that need be considered with reference to this topic are those made above the upper cascade of the rapids in the so-called Chippewa-Grass Island pool; that is to say, the diversions of the two American companies and that of the Ontario Power Co. The diversions made by the Canadian Niagara Power Co. and the Electrical Development Co. being below the upper cascade can not possibly affect the level of the navigable portions of the river or of Lake Erie. (H. Doc. No. 246, 62d Cong. 2d session, p. 11.)

The present permitted diversion from the Chippewa-Grass Island pool, assumed to be 19,350 cubic feet per second, is stated to lower the level of Lake Erie 0.07 feet, or about fourth-fifths of 1 inch. (S. Doc. No. 105, p. 12.) Maj. Keller states categorically that this diversion "will not injure nor interfere with the navigable capacity of the Niagara River." (S. Doc. No. 105, p. 12.) The effect upon the navigable capacity of the river of further diversions is stated on page 51 in a table showing the effect of each 10,000 cubic feet per second additional diverted from this pool. The effect at Lake Erie for each 10,000 cubic feet per second diverted is stated to be 0.04 foot. The maximum diversion now proposed from the Chippewa-Grass Island pool is about 32,000 cubic feet per second (20,000 on the American side of the river and 12,000 by the Ontario Power Co.); that is to say, 12,750 cubic feet per second in addition to the amount stated in the report as the amount now permissible. This additional 12,750 cubic feet per second, therefore, will cause a lowering of Lake Erie of 0.05 foot, or about three-fifths of 1 inch.

These predicted lowerings at the head of the river, measured in fractions of an inch, are quite negligible in comparison with the variations of lake level due to nature, which swing through a range of 14 feet. (S. Doc. No. 105, p. 24.)

Now, Gen. Bixby stated to this committee, on Tuesday, the fact—and it is a self-evident fact—that the full amount of diversion allowed on the Canadian side will surely be made within two or three years, whether transmission to this side is allowed or not. The question, then, which interests this committee is as to the effect upon navigability caused by allowing an extra 4,400 cubic feet per second on this side. That extra diversion would manifestly cause a difference of levels of Lake Erie of only about one-fifth of an inch. It therefore is manifest that this extra diversion can not affect navigability.

Indeed, Gen. Bixby stated to this committee that the diversion of the full amounts fixed by treaty on both sides of the river would not appreciably affect navigation.

#### EFFECT UPON THE INTEGRITY OR PROPER VOLUME OF NIAGARA RIVER AS A BOUNDARY STREAM.

The reports make it quite clear (S. Doc. No. 105, p. 13) that no diversions that have ever been proposed will injuriously affect the river in this regard. (See also H. Doc. No. 246, p. 12.)

The report of the United States engineers, made after most careful investigation, shows therefore that the diversion of the full amounts fixed by the treaty would have no appreciable effect upon the navigability of the stream or of Lake Erie and no effect upon these waters as boundary streams.

It remains to consider the results present and prospective upon the scenic beauty of the Falls.

As to the American Falls, both the reports of 1908 and 1911 show that the diversions are such that "it is doubtful whether the diversion would be appreciable" and "these changes can not be considered as important." (S. Doc. No. 105, p. 14; H. Doc. No. 246, p. 12.)

Again, the only material question here now is as to the effect upon the scenic beauty of the extra diversion of 4,400 cubic feet per second on the American side, for Congress can not limit and the Canadian Government will not limit the amount of the diversions upon the Canadian side below the treaty amounts. Figuring from the data which is given by the United States engineers in Senate Document No. 105, page 53, and House Document No. 246, page 13, and Senate Document No. 105, page 51, a diversion of 4,400 cubic feet per second on the American side would have the following effect:

At the crest of the American Falls, less than one-eighth inch.

At the Goat Island end of the Horseshoe Falls, approximately nine-sixteenths inch.

At the Canadian end of the Horseshoe Fall, less than  $1\frac{7}{8}$  inches.

At Lake Erie, approximately one-fifth inch.

These quantities are evidently insignificant, and with reference to the effect of the diversion of an extra 4,400 cubic feet per second Gen. Bixby on Tuesday stated to this committee that the diversion of that extra quantity would have no appreciable effect upon either the American Falls or upon the Horseshoe Falls.

Therefore, the diversion, over which Congress is assuming control, for the preservation of the scenic grandeur—that is, the diversions up to the treaty amount upon this side of the river, and especially the additional amount of 4,400 now asked to bring the American diversion up to the treaty amount, can have no appreciable effect upon the scenic grandeur of either the American Falls or the Canadian Falls.

So I say, gentlemen, so far as this 4,400 feet is concerned, it should be granted to somebody. In other words, the limit of 15,600 feet total diversion upon the American side which is fixed by the Burton Act should be extended to 20,000, as provided by the treaty.

Mr. GARNER. That could be effected by changing the figures in the Burton Act.

Mr. BROWN. Sure; certainly; I could make that change and other changes very easily. [Laughter.]

Now, gentlemen, let us examine the other propositions. The first (already discussed) is to raise that restriction which now deprives everybody, individuals and the public, of the use of 4,400 cubic feet of water per second. The second is to do away with the prohibition upon the transmission of power from Canada. The limitation is now 160,000 horsepower. Mr. Watrous made the statement or inference here the other day that of the 160,000 horsepower allowed to be imported from Canada under the Burton Act they are now permitting only 110,000. Now, gentlemen, I have those figures; and this will be the third insertion I wish to make. It is as follows:

The following permits for diversion have been operative since August, 1907 (H. Doc. No. 246, p. 13):

	Cubic feet per second.
Niagara Falls Power Co.....	8, 600
Niagara Falls Hydraulic Power & Machinery Co. (now Hydraulic Power Co.).....	6, 500
Lockport Hydraulic Co.....	500
Total.....	15, 600

These figures are maximums.

By the same report the following have been the permits for transmission from Canada since August, 1907:

	Horsepower.
Canadian Niagara Power Co. to Niagara Falls Power Co.....	52, 500
Electrical Development Co. to certain companies.....	46, 000
Ontario Power Co. to Niagara L. & O. P. Co.....	60, 000
Total.....	158, 500

The same report (H. Doc. No. 246, p. 15) shows that the transmission permit from the Canadian Niagara Power Co. and from the

Ontario Power Co. was practically all transmitted, the 52,500 allowed from the Canadian company being fully transmitted, and about five-sixths of the amount permitted to the Ontario Co. of the 46,000 permitted from the Electrical Developing Co. only 10,000 has been used. This is because of temporary conditions.

Mr. GARNER. The total authorized importation is 160,000 horse-power?

Mr. BROWN. Yes; and the total amount actually permitted is 158,500.

Mr. GARNER. The total amount actually transmitted is how much?

Mr. BROWN. The maximum in June, 1911, was 110,000, the difference being because the electrical company does not use all theirs; but that does not give the other companies the right to import more.

Mr. GARNER. I assume those permits are revocable?

Mr. BROWN. Yes, sir.

The CHAIRMAN. In a nutshell, as I understand it, you are in favor of utilizing the additional power we are entitled to under the treaty; secondly, you are in favor of removing any restrictions upon the importation of power from Canada; third, we would like to know, now, which of these two bills you prefer—the Smith bill or the Simmons bill?

Mr. BROWN. I would like to finish certain points. We are in favor of lifting these restrictions, from the standpoint of business men. When Gen. Bixby spoke to you Tuesday he said: "Gentlemen, the treaty between these two countries allows 36,000 cubic feet diversion upon the Canadian side" (now these are not his exact words, but it is the substance of them). "If you think that by prohibiting the importation of Canadian power you are going to do anything that is directly or indirectly to protect scenic beauty, you are mistaken, because it is not going to have the effect in the end of diminishing what would otherwise be the actual diversion on the Canadian side." Somebody asked the question, "How long—five or ten years?" "No, gentlemen," he replied, "I say if you don't take this restriction off within two or three years, they are going to use every bit of that power on the Canadian side."

Mr. DIFENDERFER. Where?

Mr. BROWN. On the Canadian side. There are industries in Buffalo and on this side which can not be run by electricity economically, because they can not get this power that would be developed on the Canadian side. There is great demand on this side for more power. Industries would immediately take up this power if it is found that the policy of the American Government is to refrain from restriction on importation. They can only import about half of that power, because they have practically agreed to save half of that for the Canadian side.

Mr. DIFENDERFER. You say that power is likely to be used to its limit within the next few years?

Mr. BROWN. I said that Gen. Bixby said it would be within two or three years, and anyone who knows conditions up there knows he is correct.

Mr. DIFENDERFER. For the very reason, as I have stated before, that they can get that power for 12, while on our side the minimum is 29.

Mr. BROWN. Those figures are not correct, but I was going to speak about the rates in a moment. And right here, would it not be a strange thing for a legislative body to come in and interfere in the matter of rates between the consumer and the producer when there is no demand for interference? The only cry from the present and prospective consumers is for more power at the same rates. Have you heard any substantial complaint of inequity or inequality or injustice on the American side?

Mr. DIFENDERFER. It is quite evident that there is a discrimination.

Mr. BROWN. Isn't the man who is taking the power and paying for it the man to kick? And is it not strange that this rate question is not troubling him, but is troubling only outside agitators? The rate question in Buffalo is not an economic question; it is simply one of politics.

Mr. DIFENDERFER. If you take the evidence of the counsel of the city of Buffalo, it looks to me as if it would take \$35,000 to make the kick.

Mr. BROWN. Wait a minute. The city of Buffalo has devoted \$35,000 to have the rates investigated. Is that right?

Mr. DIFENDERFER. That is right—to appease the kickers.

Mr. BROWN. Now, gentlemen, when anybody makes a complaint the party that asks the change has to show the proper facts. And isn't that true before a commission or before a court or before any judicial body? Isn't that true? If somebody says that in the city of Buffalo the rates are high they know it requires an investigation, and it is long and it is expensive; and then there is that other awful item—lawyers' bills.

Mr. DIFENDERFER. Yes, sir; that is an item.

Mr. BROWN. And they have to be paid—at least they have to be incurred. [Laughter.]

Mr. DIFENDERFER. I am glad you make that distinction.

Mr. BARTHOLDT. I should like to ask a few questions. I want to ask for my own information and satisfaction.

Mr. BROWN. You see, I have been drawn off on this question of rates. I am coming to the conclusion that the Congress should not trouble itself about rates.

The CHAIRMAN. In regard to rates, the Public Service Commission of New York can fix them if there is any complaint?

Mr. BROWN. Certainly, sir.

Mr. BARTHOLDT. I am concerned only in the beauty of the Falls. I regard it as the greatest asset of the people of Buffalo; I regard it a very poor investment to detract from it.

Mr. COOPER. Would you amend that by saying "the people of the world?"

Mr. BARTHOLDT. Yes, sir.

Mr. COOPER. At many places in Europe Niagara Falls is the first thing they ask about—"Have you seen the Falls?"

Mr. BARTHOLDT. Now, I want to ask this question. Mr. Brown, the only excuse for the Burton bill was to prevent detraction from the Falls—from the scenic beauty of the Falls?

Mr. BROWN. To protect the scenic grandeur.

Mr. BARTHOLDT. Precisely. Now, was the question, in connection with the treaty between Canada and the United States, of limitation, as fixed in the treaty, considered as satisfactorily answering all possible doubts as to detraction from scenic beauty?

Mr. BROWN. Certainly; yes.

Mr. BARTHOLDT. And also to the extent that the treaty findings were made after very careful investigations by the Government engineers and the National Waterways Commission, and the question of international——

Mr. BROWN. Yes; all those were considered by those who made the treaty.

Mr. GARNER. Doctor, Mr. Brown went over that before you came in.

Mr. BARTHOLDT. Now, is there any law on the statute books of the United States to preserve the beauty of Niagara Falls?

The CHAIRMAN. Nothing but the treaty.

Mr. BARTHOLDT. So that the jurisdiction of Congress is only with regard to navigation, and the other is all sentiment?

The CHAIRMAN. Yes.

Mr. LEGARE. I understood Gen. Bixby to say it would be imperceptible.

Mr. BARTHOLDT. We are naturally interested in preserving the beauty of the Canadian side as well as the American side.

Mr. BROWN. So far as the 4,400 feet is concerned, it is practically imperceptible in the length of the Falls. If you take the entire amount of diversion, you have only 4 inches less depth on the American side of the Horseshoe Falls and 9 inches less on the Canadian side.

Mr. BARTHOLDT. But Gen. Bixby said that amount would be total?

The CHAIRMAN. That is on the Horseshoe Falls side.

Mr. BROWN. But remember this thing. The United States has power only to protect the American side. When the two countries have got together and said that Canada may take 36,000 and we may take 20,000 feet, is there any reason why we should say: "You Canadians over there are not doing anything to protect scenic grandeur; we will take care of that by refraining from exercising our privilege under the treaty and by restricting importation to our side, so as to force industrial development on your side at the expense of American interests which are now ready to use the power." We know the Canadian companies are going to take the 36,000 feet. We know that it can not hurt in any degree that is sensible to the eye. Now, the extra amount on this side is 4,400 feet, and the Canadians have only to add 15,000 to get their allotted amount. Are we going to hang back until they utilize their last foot and lose this vast power forever? Is it wise, gentlemen, when the Canadians are going to divert their entire 36,000 feet and when the whole amount is, for all practical purposes, not sensibly injurious to scenic beauty?

Now, gentlemen, while I am more than willing to answer all your inquiries as best I can, your questions often anticipate points which I have in mind to cover later and thereby cause diversions, which, in this instance, I frankly admit are injurious; they injure the continuity, and hence the scenic beauty, as well as the boundary lines, of my argument. [Laughter.] Now, before I come to the questions of rates, I wish to emphasize further the objections to any restriction upon importation. It is clear, from what has been shown, that discouragement of importation can not serve any public interest. It can not help to preserve navigation, nor any boundary line, nor help military defense, nor help to preserve scenic beauty. On the contrary,

it is positively repugnant to both our public and private interests. That country will permanently enjoy the advantage of this as yet unused power which first preempts it by actual use. The next year or two is to decide this question and the decision depends upon the fact of whether you continue provisions prohibitive or restrictive of importation. It is clear, then, that any such restrictions are bad policy. Even from an American viewpoint alone, the interests of this country and of the people of the State of New York demand that we should get hold of this power as quickly as possible. But there are other objections which are conclusive against any attempted restriction or prohibition by act of Congress. I refer to the legal objections. This special and localized prohibition which is suggested is arbitrary and unreasonable. It does not treat all citizens alike in regard to the same subject matter. It is a special restriction imposed for the mere purpose of asserting the power of restriction. There is no demand for it, there is no need for it. No one appears here to advocate it, except the representative of that association of self-appointed guardians of a theory prevalent 8 or 10 years ago, but which theory has been exploded by the careful surveys and reports of the War Department; and the Chief of Engineers now tells you that if this restriction is not removed immediately this country will lose forever the use of this power, and that such restriction will not, in any degree, limit the total diversion at the Falls.

But, what is even more important, any prohibition of or restriction upon importation is contrary to the spirit and terms of the treaty of 1909, by which this country and Great Britain agreed upon the limitations to be allowed by either country with respect to the use of power at Niagara. All these questions, including that of importation, were discussed and passed upon. It was decided that it was neither necessary nor expedient to restrict importation, and such restrictions were omitted from the treaty. That treaty spoke the promise and policy of each country to the other. Each country said to the other that Canada might divert 36,000 feet; that we might divert 20,000 feet per second, and with those amounts as a maximum each country might fix limits on its own side, but that in every other respect the rights and privileges and opportunities of each country should be left free. The idea was that the Canadians could use their 36,000 feet to supply a demand wherever they might find it; and the American market was in mind. By a prohibition or restriction upon importation of power from Canada to this side we assert the right not only to control amounts of diversion upon this side but also upon the Canadian side. We deprive the Canadian investors of the market with reference to which the treaty was made. For Congress, after the treaty, to attempt to control or restrict the intended use by the Canadians to their share of the total diversions allowed (as by restricting importation) is not keeping good faith with the other party to the treaty. It is an invasion of the rights of Canada and of the Canadian investors, contrary to the treaty.

Developments and construction proceeded upon the Canadian side on the theory that the demand for power on the American side might be freely supplied by Canadian investors. This proposed legislation is for the purpose of carrying out the treaty provisions, to give effect to the treaty in so far as legislation is required. Importation should be free, therefore, not only because it is wise and consistent with the

treaty, but also because any prohibition or restriction upon importation would be repugnant to the spirit and terms of that treaty.

Mr. COOPER. Mr. Brown, I don't want to "divert" you, but I would like to have your opinion as a lawyer, if you are willing to give it to this committee as such, as to the power of Congress to regulate rates. I am sure that question is going to be discussed in the House, and, realizing your ability as a lawyer, I would like very much to get your opinion.

Mr. BROWN. Now, I want to stick a pin right there, because that is my very next proposition.

Mr. COOPER. I am glad to hear that.

Mr. BROWN. You mean a regulation of rates in connection with a restriction upon importation or upon the use of the extra 4,400?

Mr. COOPER. In both instances.

Mr. BROWN. Well, let us take importation. I say the importation restrictions should be removed, and there should be nothing said about tariff, rates, tolls, or other restrictions. That is a legal and business like proposition. Now, in this instance you could not justify a charge on the ground of a tariff. Congress can not say that potatoes brought over the boundary line at one place should be subject to a charge to which the same goods brought over the same line at a point 100 miles away would not be subject. The control of the tariff is not an arbitrary one.

Now, "toll" comes out of something of ownership. Now, no lawyer would say that either the United States Government or the States owned the waters. Nobody owns the waters; the riparian owner does not own it; he owns the use of it, the right to use it; the Government does not own the waters, but it has only the right to prevent unreasonable interference with navigation. There is no basis for any charge based on Government or State ownership.

Mr. Difenderfer said the other day: "Aren't they going to pay for this water that we are giving them?" Why, as a lawyer, I would say: "In the first place, you don't own the water. In the next place, you don't give it to them." Why? Because the right to its use belongs to the riparian owners. Neither the Government nor the State of New York has any ownership of the water itself, and neither could impose a toll or charge for its use.

Next, can the Government of the United States regulate the rates? I say, "No," for two reasons: In the first place the United States has no power to regulate rates within the State of New York. That power can not be based on any power to regulate scenic beauty, even if the latter power existed in Congress. But it does not. If the Government of the United States has the right to regulate the waters at Niagara to protect scenic beauty—much more, if it has a right to prohibit on the ground of preservation of scenic beauty—then every water power upon a navigable stream in the United States, every waterfall, which proportionate to its size and character has value as a feature of the landscape, can be prevented from being used for water power on the ground of preservation of scenic beauty.

Mr. COOPER. Has the United States any right to prevent importation of power from Canada?

The CHAIRMAN. Well, it has done so.

Mr. COOPER. I am speaking about rights.



Mr. BROWN. That is a tariff question. It is a commerce question. We say "Yes," if it is general. But do you suppose this is the only locality where power is being imported?

Mr. COOPER. No; but it would seem to me that they would have the right also to name the conditions under which they shall grant the permit.

Mr. BROWN. Has the Congress of the United States a right to say that Jim Jones shall not, at the town of Smithville, on the line, bring across daily 10 barrels of potatoes to this side of the line?

Mr. COOPER. That is not a parallel case.

Mr. BROWN. But that is what they are doing here. Now, if you have a general law which applies to all people equally, then it becomes a tariff proposition. Gentlemen, I am not trying to ram that proposition down your throats, but I am simply trying to tell you to pass that for a moment and listen to the equities of the question.

Mr. COOPER. Suppose in passing a statute of that kind just the naked law would provide for the regulation and there would not be in the statute any statement of the motives of the legislator, whether it was for scenic beauty or whether it was a matter of discretion in carrying out its power under the commerce clause. Courts don't inquire into the motive; if the law is constitutional it stands.

Mr. BROWN. I would not say "Yes" unqualifiedly. I would say they hesitate to do so, but when they find a ground which is apparently unconstitutional and illegal they set it aside.

Mr. COOPER. If, on the other hand, the law is not on its face absurd and ridiculous, but could be fairly interpreted as carrying out the commerce clause, or navigation, the court will sustain it upon this proposition: That a law shall not be set aside unless it is unconstitutional beyond a reasonable doubt?

Mr. BROWN. Yes, sir; that is the tendency under the law. Now, then, you and I won't differ on that; but notice how I want to appeal to your sense of fairness and right, and I am not hypocritical. The Burton Act upon its face shows that it was an act by the United States Government to protect scenic beauty. The treaty upon its face and by the terms in which it was drawn says it was made solely with reference to scenic beauty. That act and that treaty were frank in expressing their objects. The engineers of the United States have told you that there is no practical ground why you should legislate on the ground of protecting navigability or boundary streams, and the only ground anyone ever claims here is scenic beauty. Indeed, the only purpose of this proposed act is to carry out the treaty. Now, if I should hear a gentleman on the other side of the argument say to you: "Mr. Cooper, the Burton Act was not sharp and shrewd enough. As a matter of fact, there was no ground of legislation except to protect scenic beauty, but they gave this away on the face of the act. Then, when they came to the treaty, they fell down, too. There was no sufficient ground, in law or in fact, based on scenic beauty; but they gave themselves away. Now, beat them. Get up a law that will enable us to get something that is in fact unconstitutional, but which may be made to appear to the courts as otherwise, by concealing its effect and object." If anyone should tell you that, I should say that he is not honest and he has asked you to do something that is not honest; and I don't believe that this committee of Congress will recommend to the House to do what no man who is not dishonest would do. Am I clear?

Mr. COOPER. You are pretty pointed, though.

Mr. BROWN. Absolutely, now, I did not mean anything personal. I appreciate the fact that you were merely speculating about possibilities.

Mr. COOPER. That is all right, but I had in mind the tax on State banks, to get revenue and for other purposes; but on the face of it it was unconstitutional and the motive of the legislator was for the purpose of smashing the State banks. On the other hand, take the oleomargarine law, and the preamble of it. Everybody could see it was not for revenue; it was simply to make it very embarrassing for the oleomargarine people to do business and to compel them to state what their article is. Now, then, Congress passed a law—no, two laws, and they were attacked and went to the Supreme Court. The arguments of counsel were that the motives of the legislator were unconstitutional. The court said they did not have the right to consider the motives, and so they sustained them both. So in this particular case, if we should pass a statute and leave out the mention of scenic beauty and control that, in the exercise of our discretion under the powers granted by the Constitution, would it be unconstitutional?

Mr. BROWN. I can not tell what the result would be, but I hope mightily well it would be declared unconstitutional.

But why this seeming anxiety at times to get around the constitutional barriers which are intended to protect property rights? Why, in Canada, where there are no constitutional limitations to legislation, and where Parliament may, if it chooses, diminish and even destroy private property rights and investments, and where the courts have not the power to declare a legislative act invalid, once it should be seen that the effect of any proposed legislation was to take away such rights, especially after investments made, no committee of Parliament, nor Parliament itself, would consider it with favor for a moment. But here in this country we have express constitutional prohibitions against legislation, the enforcement of which would impair contracts or injure or destroy property rights, or discriminate between citizens of the same class, and we have a judiciary whose privilege and duty are to see to it that no legislation, State or National, which is repugnant to such express prohibitions shall be enforced. Why, then, should we, before a committee of our national Congress, be trying to solve the puzzle of how Congress might do something indirectly which it is confessedly not within its powers to do directly? Why this anxiety, disclosed before a body of men here who are sworn to protect the Constitution and laws of this Nation, and property rights established under those laws, to get around the Constitution and the courts in order to legislate against or regardless of vested property rights? And this, too, with reference to the rights of investors who do not ask for the protection of their full legal rights, but only to the extent of about one-half—that is, to the extent that investments and installations have already been made! Indeed, they do not ask you in this proposed legislation expressly to protect even that remnant of their right. We ask only that you shall not so legislate as, in terms, to prevent a fair consideration of our rights and equities in connection with the distribution of this water power. May I close, please?

The CHAIRMAN. Yes, Mr. Brown; and I trust you will be allowed to proceed.

Mr. LEGARE. I do not understand you to contend that we are without authority to prohibit the importation of power?

Mr. BROWN. I would not say that, if it is general.

Mr. LEGARE. Now, then, the other question that was asked you: If we have the power to prohibit importation, why have we not the power to put restrictions upon it? I am asking you this question because we want to be in a position to answer questions in the House.

Mr. BROWN. Now, I have not investigated these questions much, but my opinion as a lawyer is that, with general importation restrictions, proper conditions may be attached; but, taking the facts of the case here, the only purpose could be to protect scenic beauty, and the restriction on importation is a special and local one. But, gentlemen, even at that, we, the Niagara company, say this: That if you will only leave the rates to the State commission or the proper body in New York and give us a chance to be heard, the question will be decided on the facts, which you can not sift out here, and our equities and rights will have a chance to be preserved. Now, gentlemen, give us some chance of relief, if we shall show we are entitled to it, and place the limit of diversion allowed to any one company at 10,000 instead of 8,600. There should be no restriction upon importation. More than that, the amount fixed by the treaty is not a diversion of 20,000 cubic feet in any one second; it is a diversion by the day at the rate of 20,000 feet per second. Do you see the difference?

A MEMBER. A good deal.

Mr. BROWN. Suppose the 20,000 feet were all granted to one company. Under the Burton Act provisions that company could only divert for any one second that amount, although the average for the day was much less.

You know how factories are run; you know what the peak of the load is in one day. You know this: That, so far as affecting Lake Erie and the river for scenic beauty, the variation of two or three hours can not at the end of the day have any practical effect. The treaty says that the diversions shall be "not exceeding a daily diversion at the rate of 20,000 cubic feet per second." The present permits are granted on the assumption that it is a limit of 20,000 feet in any one second. So far as it affects these other conditions of general public interest, it does not amount to anything, but it does hamper the efficient use of the power plants.

Mr. COOPER. Now, suppose you only took 40,000 a second for half a day, and the other half of the day you shut up; what would be the average?

Mr. BROWN. The largest part of this power is 24-hour power.

Mr. BARTON. Most of it.

Mr. BROWN. Mills and factories to-day do not shut up in the night-time; they are working all the time. They work longer hours where they can get more and cheaper power; but it happens that about 5 or 6 o'clock the peak of the load comes up—only slightly in this case. But the treaty provisions are in daily diversions at the rate of 20,000 cubic feet per second.

May I suggest that the act should substantially contain what is contained in this proviso, which reads as follows:

That in fulfillment of the purposes of Article V of said treaty the several amounts of water of the Niagara River within the State of New York above the Falls which may be diverted under the said act or under permits of the Secretary of War in pursuance thereof shall be limited only so that the total

diversion within the State of New York of the waters of said river above the Falls of Niagara for power purposes shall not exceed in the aggregate a daily diversion at the rate of 20,000 cubic feet of water per second, and that the Secretary of War shall have authority from time to time to grant revocable permits for such daily diversion in several amounts not exceeding in the aggregate said 20,000 cubic feet per second, nor to any one individual company or corporation, as aforesaid, a maximum amount at the rate of 10,000 cubic feet per second; such grants to be made and continued only with due regard to the rights of the State of New York and its grantees in said waters of said river, and so that no monopoly shall be thereby created or continued: *And provided further*, That the quantity of electrical power which may by permits be allowed to be transmitted from the Dominion of Canada into the United States may and shall be any and all of the power by said treaty authorized to be developed within the Province of Ontario from said waters of said river that shall not be used or be required for use in the Dominion of Canada.

And may I ask also to put in a statement by Mr. Philip P. Barton and Mr. Egbert, which is substantially a summary of the principal points contained in Senate Document No. 105 and House Document No. 246—a summary for convenience—and ask that it be printed and made a part of the record?

The CHAIRMAN. Let it be printed.

Mr. BROWN. And this is drawn up by Mr. Francis Lynde Stetson, of New York, a director and stockholder of this company. Some time ago he wrote these five or six pages, which show the righteousness of some of these provisions just suggested. Might I ask that they be put in the record?

The CHAIRMAN. Yes; it will be printed, Mr. Brown.

Mr. BROWN. And, Mr. Chairman, may I ask this: If I think of anything else, may I put it in writing and send it in and have it made part of my statement in the printed record?

The CHAIRMAN. Yes.

The papers—Barton, Egbert, Stetson—offered and received into the record next follow:

**SUMMARY OF REPORTS PUBLISHED IN SENATE DOCUMENT NO. 105, SIXTY-SECOND CONGRESS, FIRST SESSION, AND IN HOUSE DOCUMENT NO. 246, SIXTY-SECOND CONGRESS, SECOND SESSION.**

(By Mr. P. P. BARTON.)

(1) So far as practical effect upon the scenery and navigability of Niagara River is concerned, the question now before Congress, when properly stated, is shown by these reports to be small and insignificant.

The question divides itself into two parts:

(1) Shall restrictions on transmission of power from Canada into the United States be removed?

(2) Shall limitation of diversion of water on the American side of the river be extended from 15,600 cubic feet per second to 20,000 cubic feet per second?

So far as permanent effect upon the river is concerned, it is obviously immaterial whether Congress answers the first question in the affirmative or in the negative. By the terms of the treaty 36,000 cubic feet per second may be diverted on the Canadian side of the river, and very soon that amount will be there diverted. Congress can not prevent this. Canada not only permits it, but by Government aid encourages and promotes it. All that Congress can do by restricting importation is to deprive American citizens of the beneficial use of power generated in Canada, which, if not utilized promptly in the United States, will be forever withdrawn by Canada. Five years ago it was estimated that a market for 50,000 horsepower would be found in Canada within transmission distance of Niagara upon completion of transmission lines (Hydro-Elec. Power Com. 1st Report, 1906, p. 7); to-day, with transmission lines not yet completed, the Province of Ontario is using nearly 90,000 horsepower from Niagara, and yet the markets estimated in 1906 are not half supplied.

As Canada surely will use its entire quota of diversion, it is evident that from the point of view of effect on the river the question of restricting importation of power may be eliminated from the discussion.

To determine the practical effect on the river of its answer to the second part of the question, Congress must ascertain the results of a diversion of 4,400 cubic feet per second from the Chippawa-Grass Island pool. The reports indicate these results with the utmost exactness.

In Senate Document No. 105, page 53, the lowering of the crest of the American Fall for 5,600 cubic feet per second diverted from above the uppermost cascade is stated to be twelve one-thousandths foot. A diversion of 4,400 cubic feet per second, therefore, would result in a lowering of not more than

$$\frac{0.012 \times 4400}{5600} = 0.00943 \text{ ft.} = 0.113 \text{ in., or less than } \frac{1}{8} \text{ of an inch.}$$

In House Document No. 246, page 13, the lowering at Terrapin Point is stated to be eleven one-hundredths foot and at the Canadian end of the Horseshoe Falls to be twenty-seven one-hundredths foot for each 10,000 cubic feet per second diverted. A diversion of 4,400 cubic feet per second accordingly would produce at Terrapin Point a lowering not more than

$$\frac{0.11 \times 4400}{10000} = 0.0484 \text{ ft.} = 0.5808 \text{ in.} = \text{approximately } \frac{1}{2} \text{ of an inch,}$$

and at the Canadian end of the Horseshoe Falls a lowering not more than

$$\frac{0.27 \times 4400}{10000} = 0.1188 \text{ ft.} = 1.4256 \text{ in., or less than } 1\frac{1}{2} \text{ in.}$$

In Senate Document No. 105, page 51, the lowering at the head of the river (Lake Erie) is stated to be four one-hundredths foot for each 10,000 cubic feet per second diverted from above the upper cascade. A diversion of 4,400 cubic feet per second, therefore, would produce at Lake Erie a lowering of

$$\frac{0.04 \times 4400}{10000} = 0.0176 \text{ ft.} = 0.2112 \text{ in., or approximately } \frac{1}{5} \text{ of an inch.}$$

Recapitulating, we find that a diversion of 4,400 cubic feet per second is reported to have the following effects:

	Inches.
At the crest of the American Falls, less than.....	$\frac{1}{8}$
At the Goat Island end of the Horseshoe Falls, approximately.....	$\frac{1}{2}$
At the Canadian end of the Horseshoe Falls, less than.....	$1\frac{1}{2}$
At Lake Erie, approximately.....	$\frac{1}{5}$

These are the quantities, and the only quantities, that can be really affected by the legislation now before Congress. That they are utterly insignificant and negligible when contrasted with the industrial benefit that will accrue to the country by permitting an additional diversion of 4,400 cubic feet per second and by removing restrictions on importation of power is made obvious by merely stating them.

## 2. EFFECT ON NAVIGABLE CAPACITY OF RIVER AND LAKE.

The reports show that the only diversions that need be considered with reference to this topic are those made above the upper cascade of the Rapids in the so-called Chippawa-Grass Island pool; that is to say, the diversions of the two American companies and that of the Ontario Power Co. The diversions made by the Canadian Niagara Power Co. and the Electrical Development Co. being below the upper cascade can not possibly effect the level of the navigable portions of the river or of Lake Erie. (H. Doc. No. 246, 62d Cong., 2d sess., p. 11.)

The present permitted diversion from the Chippawa-Grass Island pool as aimed to be 19,350 cubic feet per second is stated to lower the level of Lake Erie seven one-hundredths of a foot or about four-fifths of 1 inch. (S. Doc. No. 105, p. 12.) Maj. Keller states categorically that this diversion "will not injure nor interfere with the navigable capacity of the Niagara River." (S. Doc. No. 105, p. 12.) The effect upon the navigable capacity of the river of further diversions is stated on page 51 in a table showing the effect of each 10,000 cubic feet per second additional diverted from this pool. The effect at Lake Erie for each 10,000 cubic feet per second diverted is stated to be four one-hundredths of a foot. The maximum diversion now proposed from the Chippawa-Grass Island pool is about 22,000 cubic feet per second (20,000 on the American side of the river and 12,000 by the Ontario Power Co.); that is to say, 12,750 cubic feet per second in addition to the amount stated in the report as the amount now permissible. This additional 12,750 cubic feet per second, therefore, will

cause a lowering of Lake Erie of five one-hundredths of a foot, or about three-fifths of 1 inch.

These predicted lowerings at the head of the river measured in fractions of an inch are quite negligible in comparison with the variations of lake level due to nature, which swing through a range of 14 feet. (S. Doc. No. 105, p. 24.) The regulating device, which it is understood will be recommended by the International Waterways Commission to prevent the recurrence of low-water stages of Lake Erie due to nature, will obviously counteract completely any possible lowering of Lake Erie or of the navigable part of the river due to diversions at Niagara. (S. Doc. No. 105, p. 52. Int. Waterways Com., 7th progress rept., pp. 7-8.)

### 3. EFFECT UPON THE INTEGRITY OR PROPER VOLUME OF NIAGARA RIVER AS A BOUNDARY STREAM.

The reports make it quite clear (S. Doc. No. 105, p. 13) that no diversions that have ever been proposed will injuriously affect the river in this regard. (See also H. Doc. No. 246, p. 12.)

### 4. EFFECT ON SCENIC GRANDEUR.

On this topic the report presents in confusing quantities measurements, deductions, diagrams, and photographs designed to show not merely the effects of power diversions but also the far more dominant effects of other agencies upon the appearance of the Falls. Statements of fact are interspersed with statements of opinion. It is easy for a cursory reader to infer that aggregate effects due to several causes are mainly due to power diversions whose effect alone in reality is comparatively negligible. Separating out by themselves the figures reported as the effect of present diversions, we find that a present diversion of 19,350 cubic feet per second above the upper cascade, together with the diversions made by the two Canadian plants with intakes below the upper cascade, are stated to result as follows (S. Doc. No. 105, p. 14) :

	Inches.
Lowering of the crest of the American Falls at Prospect Point, fifty-two one-thousandths of a foot equals.....	$\frac{3}{4}$
Lowering at Terrapin Point, twenty-one one-hundredths of a foot equals....	2 $\frac{1}{2}$
Lowering at west end of Horseshoe Fall, seventy-two one-hundredths of a foot equals.....	8 $\frac{1}{2}$

These figures are presented as statements of fact. With these figures as a basis, Maj. Keller states his opinion (S. Doc. 105, p. 14) "that existing diversions have already seriously interfered with and injured the scenic grandeur of Niagara Falls at the Horseshoe." This statement is paraphrased in the 1909 report of the Chief of Engineers (p. 940) in the widely quoted statement, "As a whole, the Falls have unquestionably been seriously injured by the diversions already made. Additional diversions now under way will add to the damage." It is evident that these statements of opinion have been influenced mainly by the effects reported at Terrapin Point and at the Canadian end of the Horseshoe Fall. The photographs of the American Fall show no sensible differences in appearance resulting from far greater variations in river discharge than are proposed under the treaty restrictions of diversion, and the reports explicitly state that at the American Fall changes are inappreciable and unimportant. (H. R. Doc. 246, p. 12; S. Doc. 105, p. 14.) The most potent agency permanently affecting the ends of the Horseshoe Fall is the recession at the apex of the Horseshoe due to natural causes. The unwatering of the Canadian end of the crest of the Horseshoe Fall from this cause prior to any Canadian power diversions had progressed so far that in 1902 the Canadian park commissioners caused 250 feet of the former crest line at that time unwatered to be filled in for the purpose of improving the scenic effect of the Horseshoe Fall by obliterating certain thin streams which existed only at times of high water. Terrapin Point, owing to the continued recession of the Horseshoe, is approaching the same condition, and unless artificial means are provided for restoring the flow a part of the crest line in the vicinity of Goat Island in a few years will become dry, entirely irrespective of power diversions. With such conditions existing at the ends of the Horseshoe a very slight change in the regimen of the river from any cause produces perceptible effects at these points, but the proposition that the Falls as a whole are seriously injured by the comparatively slight changes due to power diversion is one to which few fair-minded

persons who are familiar with the Falls will describe. Whatever the effects from all causes may be, they may be offset, as pointed out by Maj. Keller (p. 15), by placing a submerged weir in the bed of the river immediately above the Horseshoe Fall.

The conclusions as to effect on scenic grandeur, stated in the reports contained in Senate Document No. 105, must be regarded as superseded by the statements contained in the later report of Lieut. Col. Riché, dated September 30, 1911, and printed in House Document No. 246, Sixty-second Congress, second session. This report summarizes and brings down to date the earlier reports. Whether or not the figures that it contains are substantially confirmatory of the figures given in the earlier report, it is certain that the expressions of opinion are more guarded and less sensational. Thus Col. Riché points out (H. Doc. 246, p. 13) that out of a total lowering of 20 inches at the Canadian end of the Horseshoe Fall reported for 1911, more than 6 inches is due to natural recession at the apex of the Horseshoe since 1906; about 8 inches is due to power diversions, and over 5 inches is due to deficiency in rainfall in the watershed supplying Lake Erie. The scenic effects of these aggregated causes are described as (1) "An appreciable decrease in the volume of flow;" (2) "Interference with the continuity and length of crest line unquestionably marring the natural beauty of this cataract." The statement is then made that "Natural causes have been chiefly instrumental in effecting these changes," but that artificial diversions of the power companies "have materially added to the 'injury or interference with the scenic grandeur of Niagara Falls.'" The report thus states categorically that the changes alleged to have occurred in the appearance of the Falls are mainly due to natural causes. It appears to be exceedingly doubtful whether in the absence of natural causes the effects due to power diversions alone would be sensible "even to the eye of a trained engineer," although it is claimed that they are susceptible of measurement, and it is certain that nature herself is the dominating agency "marring the natural beauty of this cataract."

#### 5. CERTAIN STATEMENTS COMPARED.

(See tabulation "Exhibit B.")

There seems to be some discrepancy between the results predicted in 1908 and those reported in 1911, which the Government engineers probably could explain. In Senate Document 105, page 14, it is pointed out that in 1895 there was an extremely low stage of Lake Erie, due to deficiency of precipitation, which condition, it is stated, "is sure to recur." A very exact prediction is then made of the conditions that will exist at the crest of the Falls with such a low stage of Lake Erie. It is stated that at Terrapin Point there will be a lowering of 5½ inches, due to deficiency of precipitation, which, added to 2½ inches attributed to power diversion, will make a total lowering at Terrapin Point of 8 inches. At the west end of the Horseshoe Fall there is predicted a lowering of 14 inches, due to natural lowering of the lake, which, added to 8.6 inches attributed to power diversions, will make a total of 22.6 inches (stated as "nearly 2 feet"). From the tabulation herewith, marked Exhibit A, it will be seen that the monthly mean levels of Lake Erie during the current year 1911 have approximated very closely those of 1895. In some months they have been lower than in 1895, the average of the monthly means for the year being very slightly higher than in 1895. It appears, therefore, that the predicted causes have materialized, but the results do not seem to correspond with those predicted; thus, in House Document 246, page 13, the figures of lowering reported at Terrapin Point for 1911 are only 5.48 inches, as against over 8 inches predicted, while at the west end of the Horseshoe Fall the figures reported for 1911 are 8.6 inches due to diversions, and 5 inches due to deficiency in rainfall, making a total of 13.6 inches, instead of the "nearly 2 feet" predicted. In 1911, however, there is reported a further lowering at the west end of the Horseshoe Fall of 6 inches, attributed to recession of the apex of the Horseshoe since 1906. The 1908 prediction was that under the 1911 conditions "many shallow places at both ends of the Horseshoe Fall will become dry." The changes "will result in a mutilated Niagara—one shorn of nearly half its flow and of much more than one-half its natural beauty, since many places now overflowed will be made bare, the crest line broken, and unity of effect will be seriously disturbed." (S. Doc. 105, p. 13.) The language used in the 1911 report to describe the actual results conveys an impression quite different from that created by the prediction. (H. R. Doc. 246,

p. 13.) It is safe to say that spectators of Niagara Falls during the year 1911 would be quite unable to differentiate between the spectacle presented in 1911 and that presented in any other period of corresponding lake levels, except that the recession of the apex of the Horseshoe and the diminution of the thin streams at Terrapin Point, due to that natural cause, might possibly be noted.

6. *Direct reference to the Niagara Falls Power Co.*—(S. Doc. 105, p. 16.) It is here stated that the diversion needed for a maximum profitable use of the existing plant of the Niagara Falls Power Co. may reach a total of over 12,000 cubic feet per second and that "an increase to the limit of the capacity of the existing tailrace tunnel may be regarded as a simple act of justice."

(S. Doc. 105, p. 17.) The following statement is important: "If the submerged dam above the Horseshoe Fall previously referred to be built, then additional concessions may probably safely be made to the three Canadian companies."

(S. Doc. 105, p. 39.) "No photographs were made in this period" (of shut-down) "because it was well known in advance that the small change in diversion would have no visible effect on the American Fall."

(S. Doc. 105, p. 139.) "The desirability as well as the justice of amending the Burton Act so as to permit the Niagara Falls Power Co. to divert water to the full capacity of its tailrace tunnel are plain." This recommendation is made in the report dated September 21, 1909, after mature consideration of all of the facts and opinions set forth in the 1908 report.

#### 7. MISCELLANEOUS EXTRACTS FROM THE REPORTS.

[Senate Document No. 105, Sixty-second Congress, first session.]

He further states that, in his opinion, the damage already done and that which may be anticipated from further diversions and from lower stages in Lake Erie may be largely, if not entirely, remedied by a submerged dam placed in the bed of the river immediately above Horseshoe Fall, with the object of diverting a portion of the great volume passing over the center or apex of the Horseshoe, so as to increase the streams feeding the depleted ends of that fall, and, incidentally, diminishing the rate of recession of the apex (p. 8).

The interests of justice seem to demand the further statement that, in my opinion, the damage already done, and that which may be anticipated from further diversions and from the impending fall in the level of Lake Erie, may be largely, if not entirely, remedied by a submerged dam placed in the bed of the river immediately above the Horseshoe Fall. The dam, if properly planned, would serve to change the direction of flow, so as to increase the streams that feed the Falls at Terrapin Point and at the Canadian shore. The decrease in the mighty volume that overflows the center or apex of the Horseshoe would not be noticeable. \* \* \* A very direct result of the construction of this submerged dam would be a diminution in the rate of recession of the apex of the Horseshoe. This in itself is extremely desirable (p. 15).

It is possible, however, that Congress may deem just and desirable some additional concession to the power companies, and the following is suggested as a basis for discussion:

It is understood that the intention of Congress, as expressed in the act of June 29, 1906, was to preserve to the various power companies rights which had already accrued through the investment of capital and the construction of fixed plant.

It is possible then that the diversions needed for a maximum profitable use of the existing plant of the Niagara Falls Power Co. may reach a total of over 12,000 cubic feet per second. \* \* \* An increase to the limit of the capacity of the existing tailrace tunnel may be regarded as a simple act of justice (p. 16).

If the submerged dam above the Horseshoe Fall, previously referred to, be built, then additional concessions may probably safely be made to the three Canadian companies (p. 17).

At Buffalo, in westerly gales, the water sometimes rises 8 feet, and in easterly gales sometimes falls 6 feet, giving a range of 14 feet (p. 24).

It would be unjust to charge the power companies with a lowering of the river or lake that might be due to improvements for navigation or to some other cause. That these seasonable variations in the river regimen are present is also sufficient reason why conclusions drawn from cursory and incomplete river examinations might be viewed with suspicion (p. 25).



So far as effects on Lake Erie and the river above the rapids or on the American Fall are concerned, the diversions of the Electrical Development Co. or of the Canadian Niagara Falls Power Co. have no bearing (p. 39).

While the measurements of the Lake Survey have shown with certainty that changes in outflow of the Niagara River have had no appreciable effect toward lowering Lake Erie in the past 10 years, it is equally certain that Lake Erie has already been lowered 3 to 4 inches by reason of the diversion of water tributary to the Niagara River, through the Chicago, Welland, and Erie Canals.

In discussing the injurious effects of diversions at the Falls on Lake Erie and on the Niagara River as navigable waters of the United States and upon the scenic grandeur of Niagara Falls, other diversions of the water of the Great Lakes naturally tributary to the Niagara River need consideration also, as the final injurious effect is the summation of all (p. 49).

If, however, compensating works are established and a surplus of water accumulated against dry seasons, no such serious lowerings will occur.

The navigable capacity of the Niagara River is shown by the above citations to be not seriously injured by such volumes of diversion as will fully supply the existing installations at Niagara Falls, except when the lowering is superimposed on the losses of depth coming from other diversions, and from periodic, seasonal, or temporary low water, as in time of storms.

The determination of the effects of water diversion at Niagara Falls on the cataracts themselves and on the rapids approaching them is not so exact as are the effects on the navigable river and the lake (p. 52).

While that section of the Horseshoe Fall on the American side of the international boundary toward Goat Island shows scant flow and is partially unwatered, a restoration of as much flow as is desirable does not appear a difficult engineering undertaking. Submerged concrete piers at the head of the rapids would effectually throw the current to this section of the rapids and Falls (p. 53).

Any increase of volume of flow over the Falls is always accompanied by a corresponding loss of height in the Falls (p. 55).

The continued recession of the apex of the Horseshoe Fall should tend to further shoal this area, and heavier diversions by the Canadian companies will doubtless leave it dry at times.

These photographs, and the effects on the American fall shown in the equivalent river heights derived from long series of gauge readings, corroborated by the testimony of the actual shutdown of July-August, 1908, firmly establish the fact that the American fall is in no danger of unwatering from diversions through the existing canal of the hydraulic company, the present tunnel of the power company, or the already constructed penstocks of the Ontario Co., even in conjunction with such considerable diversions in the Great Lakes above the head of the Niagara River as have been discussed, and with the lessened flow of seasons abnormally low in surplus supply.

The Horseshoe Fall, on the other hand, as shown by equivalent river heights and confirmed by the shutdown, appears in serious danger of an unwatered crest line at each end, due to all present and anticipated diversions above it, and augmented by the upstream recession of the apex.

It has converted into a spectacle the strength of 5,000,000 horses (p. 56).

Even in dimensions it can not be said that a third of the grandeur has departed when a third of the flow is absent, because the length of the crest line may be little shortened, and the height of fall is even greater when the river flow is small than when it is large.

It is only fair to state, because of some erroneous views held concerning the injury already wrought on the Falls by diversions, that during the past decade, 1899 to 1908, for the months June to October, inclusive, the Falls have had a fullness of volume and consequent grandeur barely less than that of the prior decade, 1889 to 1898 (p. 57).

While this report has dealt with injurious effects on the Rapids and Falls of the Niagara River and with interferences with navigable ways in river and lake, and has shown these up in their limiting, hurtful amounts, it seems proper to suggest certain remedial measures that may serve to harmonize the preservation inviolate of the scenic grandeur with the useful application of the splendid power of the Falls. Both of these things are eminently desirable and feasible.

A volume of 210,000 cubic feet per second with a descent between the "dead line" and the Upper Gorge of 220 feet has a potential of over 5,000,000 horsepower. This is the power of 15,000,000 strong draft horses, each limited to an eight-hour day. If it takes 10 able-bodied men to do the work of one of these

draft horses, the work potential in this fall is that of 150,000,000 men, nearly twice our population of men, women, and children.

The great companies at the Falls have created in good faith power plants to lessen the hardships of human labor, to aid transportation, to illuminate the night hours, and to add to the wealth of two nations. The power houses for the most part are architecturally excellent, harmonizing with the scenic surroundings, and the mechanical wonders wrought in solving the engineering problems of the utilization of this great head and volume of water rival as a spectacle the scenic grandeur of the Falls and add to the attractiveness of the region.

It therefore appears proper to permit and foster such ultimate developments in addition to those already in force as are compatible with the perpetuation of the scenic grandeur appreciably undiminished.

Provided there be no large increase in uplake diversions, the possibilities of continued and extended use of power at the Falls are conditioned upon the construction of regulating works in the Niagara River to avoid the wasteful outflow of the water of Lake Erie. The injury to the scenic grandeur of the Falls and the interference with the navigable waters of the Niagara River and Lake Erie, due to uplake diversions, and the injury and interference coming from periods of drought would be largely obviated by impounding in the lakes a portion the winter outflow. During the months of December to April, inclusive, enough water may be saved to hold the lakes to a proper and economical level to the betterment of navigation and yield a surplusage to partially offset diversions at the Falls. This is a practicable engineering proposition, but as the power companies are beneficiaries they should pay a fair share of the cost of the work (p. 75).

The desirability, as well as the justice, of amending the Burton Act so as to permit the Niagara Falls Power Co. to divert water to the full capacity of its tailrace tunnel are plain.

In view of the intimate bearing of this investigation upon the interests of the company, and as an acknowledgment of the helpful cooperation of the company, it is believed to be advisable to furnish the company with a copy of this report, and permission to do so is requested (p. 139).

[House Document No. 246, Sixty-second Congress, second session.]

As to the effects of diversions, to the extent at present authorized, on the integrity and proper volume of the Niagara River as a boundary stream, it is not apparent that the river through these diversions has suffered. The upper and lower river still continue to discharge approximately the same volume of water, the diminished flow being only over the cataracts and the rapids immediately above. Over this portion the stream, while appreciably decreased, still maintains sufficient width and depth to effectively delimit the boundary. Moreover, it remains impassable and continues to discharge immensely more than many of the smaller international boundary streams and has considerably more than double the flow of the St. Marys River.

It is determined that the total authorized diversion of the American companies, together with the present consumption of the Ontario company, will lower the depth on the American Fall about five-eighths inch and decrease the volume of flow about 5 per cent. As the lowering will result in unwatering little, if any, of the crest line, and as the decreased flow will be scarcely appreciable, it may be considered that the changes on the American Fall are unimportant (p. 12).

In so far as the inspections disclose, the several companies diverting water in the United States from the Niagara River or receiving electrical power in the United States transmitted from Canada have at all times complied with the provisions of their permits (p. 15).

In conclusion, it is due to the several companies and their officers to express appreciation of their generous cooperation in making supervision easy and effective and of their courtesy in acceding to every suggestion or request from this office (p. 16).

No clause bearing upon scenic conditions was incorporated in the transmission permit of the Niagara Falls Power Co. (p. 18).

## PRESERVATION OF NIAGARA FALLS.

## EXHIBIT A.

*Monthly mean levels of Lake Erie referred to mean sea level at New York.*

Year.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Yearly mean.
1895...	571.79	571.10	571.02	571.23	571.58	571.68	571.66	571.52	571.54	571.30	570.81	571.07	571.36
1907...	573.18	572.57	572.28	572.74	572.83	573.11	573.26	572.95	572.81	572.67	572.60	572.57	572.80
1908...	572.98	572.46	572.73	573.28	573.52	573.49	573.35	573.14	572.67	572.08	572.13	571.91	572.81
1910...	571.33	571.04	571.62	571.92	572.48	572.45	572.37	572.17	571.90	571.98	571.84	571.68	571.90
1911...	571.36	571.05	571.08	571.20	571.78	571.89	571.90	571.87	571.30	571.33	571.87	571.67	571.52

<sup>1</sup> Assuming that December, 1911, will be about 0.2 below November, as has been the case in 1908 and 1910, the average mean level for 1911 will be 571.52, as given above.

Mean level of Lake Erie, 1860-1875, 572.8.

Mean level of Lake Erie, 1860-1895, 572.6.

Mean level of Lake Erie, 1895-1910, inclusive, 572.13.

## EXHIBIT B.

*Lowering at crest of Horseshoe Fall with Lake Erie at level existing in 1911.*

	Terrapin Point.		West End.	
	Predicted in 1908.	Reported in 1911.	Predicted in 1908.	Reported in 1911.
	Inches.	Inches.	Inches.	Inches.
Attributed to deficiency in precipitation.....	5.5	2.00	14.0	5.0
Attributed to power diversions.....	2.5	3.48	8.6	8.6
Total.....	8.0	5.48	<sup>1</sup> 22.6	13.6
Attributed to recession at apex of Horseshoe since 1908.....				6.0

<sup>1</sup> Stated as "nearly 2 feet."

NOTES RE REPORTS PUBLISHED IN SENATE DOCUMENT 105, SIXTY-SECOND CONGRESS, FIRST SESSION, AND IN HOUSE DOCUMENT NO. 246, SIXTY-SECOND CONGRESS, SECOND SESSION.

(By Mr. C. C. EGBERT.)

The actual facts relating to the effects of the diversions of water by the power companies at Niagara Falls upon navigation and the scenery are somewhat confused and hidden by statements in regard to the effect of diversions from the Great Lakes above the Niagara River and in regard to the effects due to natural changes. Statements of opinions and prophecies as to future conditions also tend to divert the casual reader from reaching a correct conclusion. On the other hand, a careful analysis brings forth actual observations of results which show that the effects of the diversion by the power companies upon navigation and upon the scenery were at the time of the observations insignificant—so small, in fact, as to indicate that further diversions by the American companies up to the limit provided by the international treaty of May 13, 1910, will be inappreciable to any but a skilled observer, using most refined methods of determination.

The determination of the effects of the diversions of water by the power companies at Niagara are largely based upon data obtained during the shutdown of the Niagara Falls Power Co. during part of July and August, 1903, as described in Chapter VIII in Senate Document 105. The effect of the diversion upon the water levels of Lake Erie is best determined by noting the effect upon the slope of the river between the Buffalo gauge and the Austin Street gauge at Black Rock. Quoting from page 28 of Senate Document 105, "The change in the discharge due to backwater effect at Black Rock is of much importance in this discussion because it is used in determining the lowering of Lake Erie due to river diversion."

In Table 40, on page 42 of Senate Document 105, are given the daily mean water-surface elevations between July 13 and August 6, 1908, inclusive, includ-

ing days before, after, and during the shutdown. The engineers of the lake survey compare these elevations by computing and correcting them for a common lake water-surface elevation, and determine therefrom that the diversion of 6,210 cubic feet per second from the Chippewa-Grass Island Pool results in a lowering in the backwater at Austin Street of 0.028 foot (about  $\frac{1}{35}$  inch). It is more direct, and perhaps more free from errors of method and of calculation, to note the effect by comparing the elevations of water surface at Austin Street on days of similar lake levels. This has been done below in Table No. 1 on days upon which the mean daily water-surface elevations, as shown by the Buffalo gauge, did not vary more than 0.02 foot. The lake levels shown by the Buffalo gauge being equal, the fall in the river between the Buffalo gauge and the Austin Street gauge in Black Rock indicates the discharge of the river.

TABLE NO. 1.—Comparison of daily mean water-surface elevations taken from table No. 40 on page 42 of Senate Document 105.

Date.	Elevation in feet.		Fall in feet (A-B).	Effect at Austin Street.
	Buffalo (A).	Austin Street (B).		
Aug. 5.....	573.32	568.19	5.13 during diversion.....	<i>Fect.</i>
July 19.....	573.30	568.06	5.22 during shutdown.....	+0.00
July 14.....	573.28	568.03	5.25 during diversion.....	— .03
July 19.....	573.30	568.08	5.22 during shutdown.....	
July 13.....	573.26	567.98	5.28 during diversion.....	— .07
July 22.....	573.25	568.04	5.21 during shutdown.....	
July 15.....	573.25	568.04	5.21 during diversion.....	.00
July 22.....	573.25	568.04	5.21 during shutdown.....	
Aug. 4.....	573.23	568.02	5.21 during diversion.....	.00
July 22.....	573.25	568.04	5.21 during shutdown.....	
July 16.....	573.13	567.92	5.21 during diversion.....	.00
July 21.....	573.15	567.94	5.21 during shutdown.....	
July 16.....	573.13	567.92	5.21 during diversion.....	— .01
July 20.....	573.12	567.92	5.20 during shutdown.....	
Aug. 3.....	573.12	567.90	5.22 during diversion.....	— .02
July 20.....	573.12	567.92	5.20 during shutdown.....	
Mean effect upon backwater.....				— .005

The effect of the diversion of 6,210 cubic feet per second from Chippewa-Grass Island Pool, as shown by the above comparison, is —0.005 feet (less than one-sixteenth of an inch), an amount less than the probable error of observation and of the measuring instruments. This method of comparison, while showing a smaller effect, does not change the conclusion stated on page 49, namely:

“While the measurements of the lake survey have shown with certainty that changes in the outflow of the Niagara River have had no appreciable effect toward lowering Lake Erie in the past 10 years, it is equally certain that Lake Erie has already been lowered 3 to 4 inches by reason of the diversion of water tributary to the Niagara River through Chicago, Welland, and Erie Canals.”

It may perhaps be surprising to those who have not given the matter careful consideration that observations of July 13 to August 6, 1908, did not indicate a larger difference in the discharge of the river due to the diversion. The reasons for the small differences may be explained as follows: The intakes of the Niagara Falls Power Co. and of the hydraulic company are located close together near the so-called weir at the head of the rapids and immediately below islands and grass-covered shoals, so that water entering the intakes is diverted through shallow, tortuous, and weed-obstructed channels, which results in a localized lowering in the Chippewa-Grass Island Pool, which lowering reduces the flow over the so-called weir into the upper rapids by an amount approximately equal to the diversion.

While it is said above that the results as compared in Table No. 1 do not change the conclusion quoted from page 49, the difference, however, casts a shadow of doubt upon the predictions of the effect of further diversion, which predictions are based upon the lowering of backwater at Austin Street of 0.028 foot, due to diversion of 6,210 cubic feet per second.

## PRESERVATION OF NIAGARA FALLS.

[Senate Joint Resolution 143, Sixty-second Congress, second session.]

**MEMORANDUM BY THE NIAGARA FALLS POWER CO. INDICATING INJURY TO EXISTING INTERESTS BY PASSAGE OF THIS JOINT RESOLUTION, UNLESS AMENDED.**

This joint resolution purports to be an amendment of the Burton Act for the control and regulation of the waters of the Niagara River for the preservation of Niagara River and for other purposes, approved June 29, 1906, in view of the provisions of the treaty between the United States and Great Britain, proclaimed May 31, 1910.

By article V of this treaty, it is declared to be the desire of both the high contracting parties to the treaty that the limitation of diversion of waters from the Niagara River shall be accomplished "with the least possible injury to the investments which have already been made in the construction of power plants on the United States side of the river, under grants of authority from the State of New York, and on the Canadian side of the river, under licenses authorized by the Dominion of Canada and the Province of Ontario."

It is assumed therefore, that the controlling purpose of the treaty, as thus solemnly declared, is to be observed in the legislation of Congress with reference to the subject matter of the treaty.

The act of June 29, 1906, was adopted in consequence of a special message of the President of the United States asking and recommending legislation for the protection of Niagara Falls in anticipation of and without waiting for the negotiation of a treaty. Therefore, and in advance of actual demonstration of the necessity therefor, the act, necessarily complete in itself, imposed restrictions not only upon the diversion of Niagara waters within the State of New York, but also upon the amount of power to be transmitted into the United States from the Dominion of Canada and there developed from the Canadian Niagara waters.

Considering first the diversion of waters on the American side, it is to be observed that the several amounts authorized and permitted under the act of the Secretary of War, were as follows:

	Feet.
Niagara Falls Hydraulic Power & Manufacturing Co.....	6,500
Niagara Falls Power Co.....	8,600
Lockport Hydraulic Co.....	500
<b>Total .....</b>	<b>15,600</b>

This diversion of this amount of Niagara water from the American Falls has proved absolutely inappreciable to the naked eye of the disinterested observer.

As to the Niagara Falls Power Co. it has been found that the computation of the waterways commission of 8,600 cubic feet per second was insufficient to furnish the flow of water actually in operation at the time that the waterways commission was in session, and also is unequal to the production of the 100,000 horsepower which the waterways commission intended to allow.

It is unnecessary to amplify this memorandum by references to the testimony but the printed report of the hearings before the Committee on Rivers and Harbors in 1906 (H. R. 18024) will fully sustain this proposition.

It being understood then that by the allowance of 8,600 cubic feet per second it was intended to provide for the existing requirements of 100,000 horsepower in use by the Niagara Falls Power Co., serious and unintended injustice has resulted to that company by the limitation of 8,600 cubic feet. Actual demonstration showed that the amount would yield only about 82,000 horsepower and that to produce the 100,000 horsepower intended for the Niagara Falls Power Co. it was necessary for that company to have 10,500 cubic feet per second. In other words, an increase of 1,900 cubic feet per second. This being added to the aggregate amount of 15,600 feet allowed upon the American side, would make a total of 17,500 feet.

Recognizing also the other necessities of the other companies on the American side the treaty raised the maximum limit to "a daily diversion at the rate of 20,000 cubic feet per second," which can not be diminished without inflicting serious injury upon the American companies and a consequent loss upon the entire communities and industries dependent upon these companies. This moderate and reasonable enlargement by the treaty has involved and would involve no appreciable injury to the navigability or the scenic beauty of the Niagara River and Niagara Falls.

Similarly the restrictions of the act of June 28, 1906, as to the transmission of power from the Dominion of Canada are unnecessary since the ratification of the treaty, and by their continuance inflict great hardship upon the Buffalo and the Niagara frontier of the State of New York.

The treaty permits the Canadian development by the employment of 36,000 cubic feet per second and there can be no sufficient reason why the State of New York and the cities of the State of New York should be deprived of the use of any part of that Canadian power which can be spared from Canada. This particular amount is at the very beginning that which was in contemplation as being an amount entirely proper for development in Canada, and being just sufficient to meet the requirements of the agreements between the Queen Victoria Niagara Falls Park and the several Canadian companies as follows:

	Cubic feet.
Canadian Niagara Power Co.....	9,500
Ontario Power Co.....	12,000
Electrical Development Co.....	11,200
Niagara Falls Park Railway Co.....	1,500
Welland Canal or its tenants (in addition to lock service).....	1,900
	<b>36,000</b>

This aggregate amount somewhat exceeded and exceeds the aggregate of 350,000 horsepower permitted to be transmitted from Canada into the United States by the act of June 28, 1906, but the provisions of that act authorized a larger importation than would be possible under the treaty if the Canadian use be subtracted therefrom. There is therefore no suggestion of any increase over the possibilities under the Burton Act, so called, but it is submitted that since the maximum of Canadian development has been fixed by treaty there need be no limitation whatever upon the possible benefit to the citizens of the United States from the free transmission into the United States of the power so developed in Canada.

It is to be observed also that the jurisdiction of Congress is limited to the regulation of commerce and the protection of the international boundary as such. These ends being safeguarded, the use of the waters for domestic or sanitary or power purposes is within the rights of the State of New York, and the riparian owners, the largest being the Niagara Falls Power Co., which owns more than 2 miles of the river bank.

By message upon Friday, February 17, 1911, the governor of New York called attention to the rights of the State of New York and to the necessity of avoiding monopoly in the use of these waters, points which should be recognized and protected. These considerations have led to the preparation of the annexed amendment to the pending joint resolution covering all these points and the objections of the governor of New York. It is respectfully suggested that without such amendment the joint resolution can not be adopted without great injury and injustice to interests which, as above set forth, it was the object of the treaty to recognize and to save from unnecessary injury.

FRANCIS LYNDE STETSON,  
*For the Niagara Falls Power Co.*

[Senate joint resolution 143, Sixty-second Congress, second session.]

#### PROPOSED AMENDMENT.

At the end of the joint resolution, page 2, line 9, add the following:

"*Provided*, That in fulfilment of the purposes of Article V of said treaty the several amounts of water of the Niagara River within the State of New York above the Falls which may be diverted under the said act, or under permits of the Secretary of War in pursuance thereof, shall be limited only so that the total diversion within the State of New York of the waters of said river above the Falls of Niagara for power purposes shall not exceed in the aggregate a daily diversion at the rate of 20,000 cubic feet of water per second, and that the Secretary of War shall have authority from time to time to grant revocable permits for such daily diversion in several amounts not exceeding in the aggregate said 20,000 cubic feet per second, nor to any one individual company or corporation as aforesaid a maximum amount at the rate of 10,000 cubic feet per second; such grants to be made and continued only with due regard to the

rights of the State of New York and its grantees in said waters of said river, and so that no monopoly shall be thereby created or continued: *And provided further*, That the quantity of electrical power which may by permits be allowed to be transmitted from the Dominion of Canada into the United States may and shall be any and all of the power by said treaty authorized to be developed within the Province of Ontario from said waters of said river that shall not be used or be required for use in the Dominion of Canada."

COMMITTEE ON FOREIGN AFFAIRS,  
HOUSE OF REPRESENTATIVES,  
*Thursday, January 18, 1912.*

The committee met pursuant to adjournment at 10 o'clock a. m.

The CHAIRMAN. The committee will hear Gen. Francis V. Greene this morning.

FRANCIS V. GREENE. I am president of the Niagara, Lockport & Ontario Power Co., a corporation of the State of New York, and vice president of the Ontario Power Co., of Niagara Falls, a Canadian corporation. I appear on behalf of those corporations. I think it will facilitate the deliberations of the committee if they have certain maps and statements before them. I have here a set of maps, one for each member of the committee, showing the locations of the power plants at the Falls, and the locations of the transmission lines by which the power is distributed.

Mr. GARNER. Will it interfere with you now to ask you some questions that you can keep in mind as you go on with your argument?

Gen. GREENE. I was going to speak not more than a few minutes and then let the committee ask questions. I have also a copy of the Burton law and a map of the Falls made in 1876. These photographs show the conditions of the Falls. That long photograph was taken in 1906 when the Burton law was passed. These photographs were taken last summer. I have also prepared a written statement containing facts which answer a great many of the questions that were asked the other day. The statement is too long to read this morning, and I ask the chairman if it can be incorporated in the proceedings.<sup>1</sup> If the members of the committee will glance it over it might suggest certain questions. Now, with the chairman's consent, I will have these documents placed at each member's desk.

Now, as I understand it, Mr. Chairman, the interest of the United States in this matter is really to preserve Niagara Falls. The Burton law is entitled "An act to control and regulate the waters of Niagara River, preserve Niagara Falls, and for other purposes." The three things which are mentioned in the Burton law as bearing upon the question were: Whether navigation was interfered with, whether the integrity of the Niagara River as a boundary stream was injured, and whether the scenic grandeur of Niagara Falls was injured. The United States engineers have had these subjects under investigation for nearly six years, and have made their elaborate reports, and in substance they report that there is no injury to navigation, that the integrity of the river as a boundary stream is not affected, that the scenic grandeur of the American Falls is in no way affected; but they think that owing to the lowering of the thickness of the waters on the Canadian side the Canadian Falls are affected. Now, as to the engineering questions, you will notice that there is no injury. Gen. Bixby, the Chief of Engineers, testified explicitly, as I understand it, on Tuesday that the slight lowering of Lake Erie had no

effect on navigation on Lake Erie. Now, as to the grandeur, the opinion of other people than engineers is just as valuable as engineers' opinions. The engineers have endeavored to show that the Horse-shoe Falls have nine inches less water going over them in consequence of the diversion of water for power purposes. That is a very complicated scientific computation—a very complicated measurement of gauges. Whether it is entirely accurate or not, the fact is not disputed; but the opinion that the scenic beauty is affected is disputed.

I think that the committee can best satisfy itself as to the scenic grandeur of the Falls by a visit to the Falls. Failing that, I have brought these photographs for the purpose of showing that the Falls are, so far as the ordinary observer can detect, as handsome now as they ever were; that the scenic grandeur has not been injured.

MR. FLOOD. How could we tell that by a visit if we have never seen the Falls?

Gen. GREENE. You would have to compare that with the best photographs.

MR. KENDALL. Does the flow of the Falls vary with the lake levels?

Gen. GREENE. The levels vary from day to day and from month to month.

MR. KENDALL. So that photographs would not be a valuable criterion always?

Gen. GREENE. You will always find that the photographers took the photographs under the best conditions, so that the old photographs are taken to show the best conditions of the Falls; and what you see now is compared with the best conditions before there was any power plant there. The east wind will diminish the flow of water over the Falls by an amount much greater than the total diversions under the treaty.

MR. GARNER. Would it divert you for me to ask the questions now?

Gen. GREENE. No, sir.

MR. GARNER. Assuming that this committee will frame legislation under this treaty, I would like to ask you to tell the committee what reason, if any, there should be for the American side to utilize the 4,400 feet remaining; and in that connection, to utilize all that, why all plans and all propositions with reference to construction should not be placed in the hands of the Chief of Engineers or the Secretary of War?

Gen. GREENE. The first part of your question was whether the 4,400 feet should be used?

MR. GARNER. Yes.

Gen. GREENE. I see no reason why it should not be used.

MR. GARNER. Now, being one of the parties interested, what objection would you have—and is there any obstacle in law to prevent it—to placing the entire consideration of plants for the use of power under the Secretary of War, that the greatest amount of power may be obtained from the use of that water?

Gen. GREENE. As a matter of fact, I do not suppose a layman's opinion would be of any value. I do not know where you could find anything in the Constitution to permit that, provided the invested capital there is not destroyed—

MR. GARNER. Well, you must presume that the Secretary of War would not undertake to destroy any kind of enterprise.



Gen. GREENE. I do so presume, and therefore I see no practical objection.

A MEMBER. Have you any suggestions in respect of that?

Gen. GREENE. Well, I think the State of New York will claim the control.

Mr. FLOOD. What do you say to turning this control over to New York?

Gen. GREENE. I may say that I am not interested in this 4,400 feet financially, because the power house in which I am interested is on the Canadian side, but I think that it ought to be used to get the greatest amount of power out of it. Niagara water has become very precious, and I think there is no denying that statement.

Mr. FLOOD. What suggestion have you to make to accomplish that result?

Gen. GREENE. I think the Secretary of War should take up that in conjunction with the State of New York.

Mr. COOPER. The up-State public utilities commission would not undertake to divert that.

Gen. GREENE. No. Here is the present public-service law. It is a controlling law as to price, and it is absolute. As to the issue of securities, they have ample power, but no power is given to them in regard to rivers or diversion of water.

Mr. COOPER. And they would not take up the question of price except upon petition?

Gen. GREENE. The law is mandatory that upon petition of a small number of citizens that the price of electricity is unreasonable they shall investigate it.

Mr. COOPER. Only upon petition?

Gen. GREENE. Only upon petition.

Mr. COOPER. They can not act upon their own initiative?

Gen. GREENE. If they act upon their own initiative they never could get through with the business. It is all they can do to hear complaints now.

Mr. GARNER. Is it not a fact that this commission has so much work to do that it is next to impossible for an individual who claims to be paying too much for gas and electricity to get his complaints before it?

Gen. GREENE. No, sir; the commission is hearing such complaints every day in the week.

Mr. GARNER. I was told that the city of Buffalo had now arranged a fund of \$35,000 for submitting cases to that commission. If it takes that much to submit a case to that commission of New York, I do not see how private citizens can submit their cases intelligently.

Gen. GREENE. I understand that is for getting expert testimony to convince the commission.

Mr. GARNER. Then, if it is necessary for the city of Buffalo to get expert testimony for the purpose of convincing the commission, would it not also be necessary for the ordinary citizen to get expert testimony to convince the commission?

Gen. GREENE. I did not suppose a private citizen could expect the commission to take his word alone.

Mr. KENDALL. General, is there any competition between the companies in the charge for electrical current?

Gen. GREENE. The power companies are scattered in different territories. The decision of the public-service commission in New York is that they will not permit a competition.

Mr. KENDALL. Don't you think that is wrong?

Gen. GREENE. No, sir; I think it is absolutely right, because they have the power to regulate the price. Now, 10 years ago——

Mr. DIFENDERFER. That commission has the right to fix the price?

Gen. GREENE. Yes, sir.

Mr. DIFENDERFER. They do fix the price?

Gen. GREENE. They do. Now, 10 years ago the gas and electric companies were competing in nearly every town. The result of that was the duplication of capital. There was a war between the companies, and prices were slaughtered. Then the companies got together and the price went up and the public paid the bill.

Mr. DIFENDERFER. As usual.

Gen. GREENE. Now, the public-service commission of New York, in two or three decisions, has declined to permit two competing companies, but has fixed the standard of price and quality of gas and electricity.

Mr. DIFENDERFER. Why should they discriminate? What price is Lockport paying for horsepower?

Gen. GREENE. \$16 per horsepower.

Mr. DIFENDERFER. What is the price paid in Buffalo?

Gen. GREENE. I do not know.

Mr. DIFENDERFER. The difference is about 6 miles in favor of Lockport?

Gen. GREENE. Yes.

Mr. DIFENDERFER. Now, you are selling electricity at \$16 per horsepower. Is it not a fact that it is sold in Buffalo at \$29?

Gen. GREENE. I do not know, sir.

Mr. DIFENDERFER. Who do you think could tell us?

Gen. GREENE. Some representative of the company which sells in Buffalo.

Mr. DIFENDERFER. Then, General, I propose to go back to Mr. Garner's question. If an individual were to go before the State commission and enter a protest against the price charged for electricity, would it be possible for that company complained against to penalize the individual?

Gen. GREENE. No, sir.

Mr. DIFENDERFER. Absolutely?

Gen. GREENE. Absolutely.

Mr. DIFENDERFER. You know of no case where this happened?

Gen. GREENE. I can not say that I know of such a case, because I do not know the business of the company distributing power in Buffalo; but I say that can not happen, because the public-service law provides a remedy for that.

Mr. DIFENDERFER. Yes; but if a man is not permitted to take his case before the commission, the State can not act?

Gen. GREENE. The law says that the commission shall investigate if 100 citizens make the protest; but in a population of 450,000 people is it your idea that one individual can make his statement and that can be accepted?

Mr. DIFENDERFER. No; but it should be.

Gen. GREENE. Well, then, if there are not 100 people to say the prices are unreasonable, it is quite evident that there is no unreasonableness.

Mr. DIFENDERFER. Then it is a fact that the city of Buffalo has to raise a fund to protect that right?

Gen. GREENE. Yes, sir.

Mr. DIFENDERFER. You are an expert in power development?

Gen. GREENE. Yes.

Mr. DIFENDERFER. What methods are followed in order to get the highest efficiency from the present diversion on the American side?

Gen. GREENE. Well, the methods which are followed there, I should say, are completely up to date. I am not sure that I know what methods you wish me to describe.

Mr. DIFENDERFER. Yes; I would like to have you—

Gen. GREENE. The Hydraulic Manufacturing Co. has a canal which goes through the city of Niagara Falls and takes the water at a point above the river about a mile below the Falls with a very small loss of head—a few feet; it then drops the water through machinery into the lower river.

Mr. DIFENDERFER. The hydroelectric commission of Ontario is a distributing company?

Gen. GREENE. Yes, sir.

Mr. DIFENDERFER. Do you sell it electricity?

Gen. GREENE. Yes, sir.

Mr. DIFENDERFER. At what price?

Gen. GREENE. At \$9.40 per horsepower.

Mr. DIFENDERFER. How much power does your company sell to this commission?

Gen. GREENE. About 20,000 horsepower.

Mr. DIFENDERFER. Have you any limit as to the amount you are to sell to this company?

Gen. GREENE. 100,000 horsepower.

Mr. DIFENDERFER. Now, what is the price that the cities and villages along the frontier of Canada pay to this company?

Gen. GREENE. Along the lines of the hydroelectric commission?

Mr. DIFENDERFER. Yes.

Gen. GREENE. They pay actual cost without profit; and the law says that the actual cost shall be figured at the price paid to the Ontario Power Co. for power, plus operating expenses, plus sinking fund and interest on the bonds, plus maintenance and depreciation, and they divide that among the cities in proportion to distance of transmission. I think the lowest price named is \$16, and as far as 120 miles away at London, my recollection is, the price is \$24. They are talking of going to Windsor on the Detroit River, and I think the price there is \$30.

Mr. DIFENDERFER. Do you think there is a possible prospect of their ever doing it?

Gen. GREENE. Possible.

Mr. DIFENDERFER. Is it probable?

Gen. GREENE. I should say not probable, on account of the distance.

Mr. DIFENDERFER. So that the Detroit people are not very likely to be accommodated from this source?

Gen. GREENE. That is a matter of opinion.

Mr. DIFENDERFER. Now, then, your company has built on Dominion land owned by the park commission?

Gen. GREENE. Yes, sir.

Mr. DIFENDERFER. You pay rental?

Gen. GREENE. It is \$1.50 for the first 20,000, \$1 for the next 10,000, 75 cents for the next, and 50 cents for every horsepower over that.

Mr. DIFENDERFER. Now, I am speaking of the Canadian side of this proposition. These rentals are used for the building of boulevards?

Gen. GREENE. They were used for buildings at the park, and now it is for a boulevard.

Mr. DIFENDERFER. And this money was to be used for that purpose?

Gen. GREENE. They are using it for that.

Mr. DIFENDERFER. Is there any such boulevard on the American side?

Gen. GREENE. No; I think not.

Mr. DIFENDERFER. Have you any reason to give why that proposition should not be made for the American side?

Gen. GREENE. It is the difference of who owns the land. The Canadian Province owns the land on their side.

Mr. DIFENDERFER. You know that this proposition has been suggested for 30 years?

Gen. GREENE. I did not know that.

Mr. DIFENDERFER. I believe that is a fact. Now, does the company make a profit on the power sold to the hydroelectric commission?

Gen. GREENE. Well, until the books close in a year or two, I would not be sure about it.

Mr. DIFENDERFER. Well, I don't like to be side-stepped on that. I want a different answer.

Gen. GREENE. I think we are going to make a slight profit, but I am not sure of it.

Mr. DIFENDERFER. And you make a slight profit?

Gen. GREENE. Nine forty.

Mr. DIFENDERFER. That is for the necessities?

Gen. GREENE. It is 50 cents tax for 40,000 horsepower.

Mr. DIFENDERFER. What is the cost of the transmission of power from the Canadian side to the American side?

Gen. GREENE. It depends upon the distance. You mean just to the boundary line or to Syracuse, 160 miles away?

Mr. DIFENDERFER. No; just to the boundary line.

Gen. GREENE. The cost of transforming and transmitting to the boundary line is something like \$2—between two and two and a half.

Mr. DIFENDERFER. Now, supposing your company to have come into the city of Buffalo and not skirted the boundary of Buffalo as has been stated here, at what price could you have furnished electric power to the people of Buffalo?

Gen. GREENE. We are furnishing the suburbs at twenty to twenty-four dollars.

Mr. DIFENDERFER. Some years ago there was a proposition to enter the city of Buffalo—your company?

Gen. GREENE. Yes, sir.

Mr. DIFENDERFER. What were the circumstances under which you were to secure that franchise?

Gen. GREENE. We were required to put every wire under ground.

Mr. DIFENDERFER. What else?

Gen. GREENE. That was enough to bankrupt us.

Mr. DIFENDERFER. Did you not require that you be permitted to have the same terms granted you that were granted to the original company?

Gen. GREENE. No, sir; there was no use of coming into competition with them unless we were on an equal basis.

Mr. DIFENDERFER. But you came in later; so that there was a vast improvement in the production of electricity that would have given you an advantage?

Gen. GREENE. Not very great.

Mr. DIFENDERFER. Is it not a fact that you did not care to compete with the Buffalo people?

Gen. GREENE. We would have been very glad to compete with them on equal terms.

Mr. DIFENDERFER. Could they compete with you on equal terms at Lockport or any of the towns skirting the city of Buffalo?

Gen. GREENE. I do not see why they have not.

Mr. DIFENDERFER. Why is it they do not?

Gen. GREENE. Because it does not pay.

Mr. DIFENDERFER. Isn't it a gentleman's agreement?

Gen. GREENE. No, sir; absolutely not.

Mr. DIFENDERFER. Now, in the start, giving your testimony here, you placed particular stress upon the scenic proposition here, the destruction of the scenery about the falls. Do you know whether or not at any time that proposition was created and the point raised by the companies themselves in order to throw dust into the people's eyes? Do you know whether or not you had a newspaper man employed to agitate that question?

Gen. GREENE. I did not; absolutely did not.

Mr. DIFENDERFER. Now, I understand that the scenic part of it is but an incident here; that that is the thing that you people are trying to place uppermost before this committee, but I appreciate this fact: That there is a far more potent factor back of this, and that is, that the people owning these rights to-day should be made to use every part of the electricity that they can use, at a price that would be profitable and at the same time beneficial to the community which they serve. If you can serve Lockport at \$16 it seems to me that the companies are placing an extraordinary burden upon the people in the city of Buffalo.

Gen. GREENE. Outside of the city of Buffalo we sell at from twenty to twenty-four dollars, depending on the quantity.

Mr. DIFENDERFER. What do you get in Rochester?

Gen. GREENE. \$25.

Mr. DIFENDERFER. Are you in any way associated with the Mackenzie-Mann Co.?

Gen. GREENE. No, sir.

Mr. DIFENDERFER. Do you sell them any power?

Gen. GREENE. No, sir.

Mr. DIFENDERFER. Do you buy any?

Gen. GREENE. No, sir.

Mr. DIFENDERFER. Do you know whether or not the General Electric Co. buys any?

Gen. GREENE. I know nothing at all about the General Electric Co.'s business.

Mr. GARNER. General, let us get back to the two original propositions. First, is there any objection to utilizing the 4,400 feet; and, second, is there any reason why we should not import the full extent of the power created in Canada to the United States?

Gen. GREENE. I say there is no reason why you should not take the 4,400 feet. There is no reason why you should not import the full extent of the power created in Canada to the United States.

Mr. GARNER. Is there any reason why we should not make a limit of cost on both sides?

Gen. GREENE. I think there is a reason why—because you have not the judicial machinery to determine what the price should be.

The CHAIRMAN. With whom, in your opinion, should the power to fix the tolls be lodged—with the Secretary of War or the New York Public Service Commission?

Gen. GREENE. With the Public Service Commission of the State of New York, which has given entire satisfaction to the people of that State for more than five years.

The CHAIRMAN. I agree with you about that.

Mr. GARNER. Would there be any objection; and if so, what objection, to the United States Government having a commission for the purpose of regulating the prices of power to be furnished both from the American Government and that to be furnished by Canada?

Gen. GREENE. What would be the respective limits of jurisdiction?

Mr. GARNER. The United States would absolutely control the prices from Niagara Falls, it being a navigable stream and a boundary. What is the objection to fixing a commission?

Gen. GREENE. The only objection is that it has already been done by the State of New York.

A MEMBER. Is that as to Canada?

Gen. GREENE. Yes, sir. Any power imported from Canada can not be sold except subject to the jurisdiction of the Public Service Commission of New York.

The CHAIRMAN. In that connection, General, I desire to say that the State of New York, through the attorney general, Mr. Carmody, and the commissioners of public service, with the commissioners of conservation, will be represented here next Tuesday.

Mr. KENDALL. General, I notice in your statement that you appear on behalf of both the New York corporation and the Canadian?

Gen. GREENE. Yes, sir.

Mr. KENDALL. Do you know whether there is any community of interest to the extent of there being an identity of stockholders? Are any of the American stockholders interested in the Canadian company?

Gen. GREENE. Some of the stockholders of the Canadian corporation are stockholders of the New York corporation, but in the aggregate they are a minority and they do not control the New York corporation.

Mr. KENDALL. But would not their interests be such that they would not desire an active competition?

Gen. GREENE. There could not be any competition; one is a distributing company in New York and the other is a power-house company in Canada; one sells to the other.

Mr. KENDALL. You said you did not think it would be proper to have any competition between the two sides?

Gen. GREENE. No, sir; I did not say that.

Mr. KENDALL. Yes; but I asked you a few moments ago if it would not be a beneficial arrangement to have a competition, and I understood you to say that it would not be on account of the New York commission regulating it?

Gen. GREENE. No, sir; I did not say that.

Mr. SHARP. Any active competition with the American side.

Gen. GREENE. I do not think you will ever get competition in the same locality; experience has shown that that is a failure; it does not produce low prices, but destroys capital.

Mr. SHARP. We have been more or less entertained here by people representing Detroit interests or the people of Detroit. They earnestly desire this importation to compete with the higher rates in Detroit. Now, if that be 192 miles away, it would be much easier to transmit that power from New York. In other words, if a competition is good for Detroit and other places, I should think it would be just as good for New York and the other side.

Gen. GREENE. I do know that the people in New York are entirely satisfied with the public-service commission. I do know that there has never been a complaint of the price of power of the companies which I represent for six years.

Mr. GARNER. As I understand you, General, it makes no difference how many companies you have, if the commission has the absolute power to fix the price there can not be any competition?

Gen. GREENE. That is the theory of the law.

Mr. GARNER. In other words, the commission fixes maximum price?

Gen. GREENE. Yes, sir; but you can sell at much less.

Mr. GARNER. Then there is an opportunity for competition under the commission law of New York?

Gen. GREENE. Oh, yes; but another feature of the law requires that the public-service commission shall approve the issue of securities, and sometimes they have declined to do that for the purpose of making two electrical distributing companies.

Mr. COOPER. Is not the whole idea that of making a monopoly?

Gen. GREENE. A regulated monopoly. That is what railroads are, and that is what electrical companies are, and the idea of competition is an idea of the past.

Mr. DIFENDERFER. Is it true or not that the Electrical Development Co. is practically owned by the Mackenzie-Mann interests?

Gen. GREENE. That is commonly reported. It is common talk.

Mr. FLOOD. Do I understand you to say there has been no complaint on the American side on account of the fact that power is cheaper on the Canadian side?

Gen. GREENE. The Niagara-Lockport lines extend west as far as Dunkirk, and no complaint has been made to us that the rates were unreasonable.

Mr. FLOOD. People on this side are satisfied to see power cheaper on the other side?

Gen. GREENE. There is no comparison. Do you understand how it is sold on the Canadian side? It is sold on a Government bond bearing 4 per cent interest and sold at 102½. Now, the members of

this committee claim that a public-service corporation should not get a return of its capital.

Mr. FLOOD. What is the capital of the original company?

Gen. GREENE. The company in Canada?

Mr. DIFENDERFER. The Ontario Power Co.

Gen. GREENE. The amount of outstanding—the amount invested in the property is \$30,000,000.

Mr. FLOOD. That is what it cost?

Gen. GREENE. Yes, sir.

Mr. FLOOD. What is the cost of both plants?

Gen. GREENE. The New York corporation—about eight or nine million dollars.

Mr. FLOOD. What is the bond issue?

Gen. GREENE. On the Canadian side it is about ten million, but on the American side about five million.

Mr. FLOOD. What is the capital stock?

Gen. GREENE. The capital stock on the Canadian side is about \$6,000,000 and on the American side about \$4,000,000.

Mr. FLOOD. What dividends do they pay?

Gen. GREENE. Neither company has ever paid a dividend.

Mr. FLOOD. What is the stock selling for now?

Gen. GREENE. There is no active market in either of them. The quotations are about 50.

The CHAIRMAN. There has never been any complaint about extortionate prices by any citizens of New York against your companies?

Gen. GREENE. No, sir.

Mr. FLOOD. What did you say the stock was selling for?

Gen. GREENE. Around 50.

Mr. FLOOD. Have you laid aside any surplus fund?

Gen. GREENE. No, sir; the companies are earning something more than their interest.

A MEMBER. You turn that into the company instead of paying it out in dividends.

Mr. DIFENDERFER. What was the original capitalization?

Gen. GREENE. That is the original capitalization.

Mr. DIFENDERFER. Thirteen millions?

Gen. GREENE. Yes, sir; but it has been increased from year to year.

Mr. DIFENDERFER. How much was paid into the company originally, in cash? There are two kinds of water, you know—one goes over Niagara Falls and the other goes into stock.

Gen. GREENE. Why, the equity over and above the bonds is about three or four million dollars on the Canada side and about as much on the American side.

Mr. DIFENDERFER. Now, as a business man you would know who your competitors were, would you not?

Gen. GREENE. I should think so.

Mr. DIFENDERFER. Well, are the Mackenzie-Mann interests involved in the Ontario Power Co.?

Gen. GREENE. No, sir.

Mr. DIFENDERFER. In no way?

Gen. GREENE. No, sir.

Mr. DIFENDERFER. Are there stockholders?

Gen. GREENE. They are not.



**Mr. DIFENDERFER.** I simply ask that because it might explain away why the Electrical Development Co. does not ship or transmit power to this company.

**Gen. GREENE.** I think they do not. I answer you absolutely that they are not interested to a dollar in our company, and there is no arrangement with them that they shall bring power to this company.

**Mr. DIFENDERFER.** Why is it that the Mackenzie-Mann interests do not bring their electricity to this company?

**Gen. GREENE.** Because it costs an enormous amount of money to build transmission lines and because we have not paid dividends for six years they probably think it does not pay.

**Mr. COOPER.** Is there not a very rapid industrial development going on in Canada?

**Gen. GREENE.** Yes, sir.

**Mr. COOPER.** And is it not very probable that Canada will get all of this?

**Gen. GREENE.** Yes, sir.

**A MEMBER.** General, do you believe that this additional transmission into this country will materially diminish the price?

**Gen. GREENE.** No, sir.

**A MEMBER.** There would be no benefit in anybody taking the power?

**Gen. GREENE.** No; because the price at which the power is sold is very much less than the price of steam power, and that allows the trolley lines to extend their tracks to points they could not otherwise reach.

**Mr. FLOOD.** What is the difference in price between steam power and electric power?

**Gen. GREENE.** Steam power comes somewhere between forty and fifty dollars per horsepower, and yet we sell in the vicinity of the power plant at twelve fifty. At Lockport we sell at sixteen; and at Syracuse we sell at thirty.

**Mr. DIFENDERFER.** How much at Rochester?

**Gen. GREENE.** Twenty-five. In any event, we are a quarter or a third below the price of steam power.

**Mr. DIFENDERFER.** How do you account for your ability to sell it in Rochester for 25 when the charge in Buffalo is 29?

**Gen. GREENE.** I can not give you any answer in regard to the prices in Buffalo, because I do not know their business.

**Mr. DIFENDERFER.** Now, when this treaty was framed between this country and Canada—you and I are both laymen on this proposition; I am not a lawyer and you are not a lawyer—who was it that suggested the 36,000 cubic feet per second in Canada and the 20,000 for the American side?

**Gen. GREENE.** As I understand that, it was made by the International Waterways Commission at the request of the Secretary of State, who was negotiating the treaty.

**Mr. DIFENDERFER.** Do you know whether or not any suggestions came from these power companies?

**Gen. GREENE.** Some were made, but they were not considered. They were informed by the Secretary of State that he would get his own information from the Government authorities.

**Mr. FLOOD.** Did not the suggestion rather come from Canada?

Gen. GREENE. Well, I have never seen the minutes of the meetings between Mr. Bryce and Mr. Root.

Mr. GARNER. General, do I understand you correctly when you say that these 36,000 cubic feet were awarded to Canada and 20,000 to the United States at the suggestion of the International Waterways Commission?

Gen. GREENE. In response to the request of the Secretary of State for information.

Mr. DIFENDERFER. Who gave that information?

Mr. GARNER. The engineering board.

Gen. GREENE. The International Waterways Commission of that time. You will find reports in the back history of this matter in the investigation of 1906.

A MEMBER. March 19, 1906.

Gen. GREENE. You will see that figures up. March 19, 1906, International Waterways Commission, and here is their signed recommendation.

Mr. SHARP. General, are you familiar with the reasons why this discrimination was made?

Gen. GREENE. I understand that the reason why the United States was allotted 20,000 feet is that about 90 per cent of the Falls is on Canadian territory.

Mr. SHARP. That is what I thought.

Gen. GREENE. The boundary line is not in the center of the stream, but runs through the thin water near Goat Island, and the report of the engineers is that only 5 per cent goes over the American Falls and perhaps 2 or 3 per cent over the American side of the Canadian Falls; so that less than 10 per cent of the water of Niagara Falls is on the territory of the United States.

Mr. KENDALL. Where do you say that boundary line is?

Gen. GREENE. At Terrapin Point.

Mr. SHARP. Another reason I heard is that the supposed loss of the drainage canal at Chicago—

Gen. GREENE. Oh, that always appears; 10,000 feet at Chicago.

Mr. SHARP. Are you acquainted with the operations of the She-winnegan Power Co.?

Gen. GREENE. I visited it once.

Mr. SHARP. Do you know what rate they are getting for their power?

Gen. GREENE. No; I do not.

Mr. DIFENDERFER. General, the Ontario Power Co. is a corporation?

Gen. GREENE. Yes, sir.

Mr. DIFENDERFER. And it is a power-distributing company?

Gen. GREENE. Yes, sir.

Mr. DIFENDERFER. And you are the vice president?

Gen. GREENE. Yes, sir.

Mr. DIFENDERFER. So that your association with the Ontario Power Co. would be very intimate?

Gen. GREENE. Yes, sir.

Mr. DIFENDERFER. Now, the Niagara, Lockport & Ontario Power Co. is the company that distributes the power created by the Ontario Power Co.?

Gen. GREENE. Yes, sir.

Mr. DIFENDERFER. It is the distributing company?

Gen. GREENE. Yes, sir.

Mr. DIFENDERFER. And you take this product at the center of the river?

Gen. GREENE. Yes, sir.

Mr. DIFENDERFER. Then, you must have information as to what it costs to deliver it to the center of the Niagara River?

Gen. GREENE. I have previously answered that question.

Mr. DIFENDERFER. And you say that the MacKenzie-Mann Co., which is the Electrical Development Co., could not afford to bring it into the United States?

Gen. GREENE. I have made that statement.

Mr. DIFENDERFER. How do you dovetail the two—that you can afford as a member of these companies to bring this power to this side and distribute it to Rochester, and so on, and yet you say the MacKenzie-Mann Co. can not bring it here to Buffalo?

Gen. GREENE. I did not say anything about Buffalo. Of course, if there are any representatives of the MacKenzie-Mann interests here they can speak better than I can, but if they are not, I would say that I would not ask capitalists to put seven or eight million dollars into a second transmission company to use their power in New York, because it would not produce any return.

Mr. DIFENDERFER. Now, then, it would be practically impossible to expect that company to deliver any electricity in Detroit under those circumstances, would it not?

Gen. GREENE. The MacKenzie-Mann Co.?

Mr. DIFENDERFER. Yes.

Gen. GREENE. I don't understand——

Mr. DIFENDERFER. I am just taking a hypothesis.

Gen. GREENE. I should not expect to make any money by going to Detroit.

Mr. DIFENDERFER. And you rather an acute business man; you have the reputation of being a rather acute business man?

Gen. GREENE. Yes, sir. [Laughter.]

Mr. DIFENDERFER. Now, the MacKenzie-Mann Co. is——

Gen. GREENE. They are rather acute, too.

Mr. DIFENDERFER. If they are not able to do it, it is quite evident that no other company will ever, within our lifetime, supply Detroit, or even Windsor?

Gen. GREENE. Now, when you talk about your lifetime, I don't know your expectation of life——

Mr. DIFENDERFER. About three or four years. [Laughter.]

Gen. GREENE. But what is possible in electricity in 15 years that no man can say. It was about 15 years ago that they said we could not take the power to Buffalo; now we run cars by it in Oswego.

Mr. DIFENDERFER. What do you sell it for in Oswego?

Gen. GREENE. The Syracuse lines run from Syracuse to Oswego. Detroit is about 225 miles away. Before the hydroelectric-power commission was formed we considered the idea of going to Detroit, but we could not agree with the people of Detroit on the price; we could not see, from the price they were willing to pay, that it would be a successful commercial venture. Now, the hydroelectric commission distributing at cost is another proposition. They have figured the distance to Buffalo to be 225 miles. Now, I don't want to take

up the time of this committee, but this matter of transmission depends on the transmission of voltage; and voltage, in electricity, is practically synonymous with pressure.

Now, when the Niagara Falls Co. took their power to Buffalo some 10 or 12 years ago the highest voltage they could get was 11,000; that was in 1896, 16 years ago. I think there was a great deal of doubt whether it was going to be a success, and it was a success. We came along in 1906 and we went to 60,000. The hydroelectric power commission is using 110,000. Now, as I understand it, the distance you can take it is approximately proportionate to the pressure, and that depends upon getting an insulator which will hold the current.

Mr. FLOOD. With 110,000, how far can you carry the current?

Gen. GREENE. I should say 200 miles, or even more, but there is a loss, and the steam plants are every year improving in efficiency.

Mr. COOPER. General, do you know anything about the development of crude oil—that there are a great many manufacturers who claim to-day that they can make power cheaper than you can sell it?

Gen. GREENE. Yes; I know they claim it, but at what price?

Mr. COOPER. That is, the price which you sell it at. We claim that we can make power with our oil engines cheaper than we could buy it from you if you were located in Buffalo.

Gen. GREENE. I don't doubt that, because there has been a very remarkable development in crude-oil engines.

Mr. DIFENDERFER. Now, at a distance far remote from your plant, I would state that at the Pardee mine they have an immense amount of power that can be used (and I am not informed that they are unable to supply it) a great deal more cheaply than the people are selling it to-day.

Gen. GREENE. I understand that a hydroelectric plant is being constructed at Scranton—

Mr. DIFENDERFER. This is the Pardee-Areo plant that I am talking about, and they claim that for the next 50 years they can supply electricity without any perceptible decrease.

Gen. GREENE. New York is not blessed with culm banks.

Mr. DIFENDERFER. No; but I say they are getting their culm as cheap as you are getting your water.

Gen. GREENE. Yes.

A MEMBER. Is there any other company that transmits power into this country except your company?

Gen. GREENE. Not beyond Buffalo.

A MEMBER. The Electrical Development Co. is not a transmission company?

Gen. GREENE. They have no transmission lines in the United States.

Mr. GARNER. If Congress, acting for the United States, should decide that to use the 4,400 feet additional would not affect the scenic beauty of the Falls, and that it was advisable to permit Canada to import power into the United States, would not the whole question be solved as to the construction of the works and the charges, if we should provide that everything should be done under the Secretary of War?

Gen. GREENE. What are the limits of his supervision?

Mr. GARNER. Limits as to the conditions precedent and the establishment of plants in the United States and the prices to be charged for the power imported.

Gen. GREENE. I do not know about the machinery.

Mr. GARNER. Well, Congress could furnish him with machinery, and it is supposed that the engineering department is the best body to determine the cost of production.

Gen. GREENE. I was an officer of engineers for 20 years; I would not dispute that statement.

Mr. GARNER. Yes; but I am saying that the Engineer Department is the best organization to determine the price.

Gen. GREENE. I do not think that the cost or price is a matter that has often come to them as engineers. As to the commercial questions as to what returns are fair on an investment of capital, I do not think they are experts.

Mr. COOPER. General, in answer to a question I asked you, you gave as your answer, did you not, that the up-State public utilities commission would claim that it would be an infringement of their rights in New York if Congress undertook to fix the rates?

Gen. GREENE. Well, I would say that there would be two bodies with the same powers; but what action the State of New York would take under those circumstances it is not for me to say. I say that here is a commission that for five years has done that work and done it very satisfactorily. Now, if you create a United States agency to do that work you have two bodies doing the same thing in the State of New York.

Mr. COOPER. You agree to what seems to be Mr. Garner's idea (and it is mine, too) that Congress should delegate to the Engineer Department the means by which this power is to be diverted? That is, that they should get the maximum results?

Gen. GREENE. Yes, sir; there is no one who can determine better than they how the works should be constructed.

Mr. DIFENDERFER. Then they have the power to discriminate in the prices—the New York Public Service Commission? Have they the right to discriminate as between localities?

Gen. GREENE. They have the right to discriminate between localities, certainly. The price is not the same between 10 miles away and 200 miles away.

Mr. DIFENDERFER. Then do you not think they have discriminated in the prices charged at Buffalo and at Lockport?

Gen. GREENE. They have never investigated it, but they are going to do it now.

Mr. DIFENDERFER. Here you have something like sixty or sixty two million dollars of invested capital. The law says that if 100 people think the prices are unreasonable the commission shall investigate and determine the fact. That acts something like the recall, does it not?

Gen. GREENE. Yes, sir. [Laughter.]

I say I do not think you can ask that one man should have the power to say anything involving such large interests—

Mr. DIFENDERFER. One man should have that power. One man should be permitted to set a precedent for the rest in a decision from that board.

Gen. GREENE. You will have to fight that out with the Legislature of New York.

Mr. DIFFENDERFER. My contention is that the public-service commission of New York is not doing its duty to the city of Buffalo.

Gen. GREENE. I have never heard any complaint from the people of New York. The people that you are desiring to protect are perfectly satisfied.

Mr. KENDALL. The rates in Buffalo are perfectly uniform with the rates in New York, and if one man has a grievance his neighbors ought to have it also.

Gen. GREENE. There would be a hundred.

Mr. KENDALL. I think it is not unreasonable at all that a hundred should be required to join.

Gen. GREENE. In half a million people?

Mr. DIFFENDERFER. Yes; but if that single complaint is brought, that complaint is public, and I contend that in the city of Buffalo the party making that complaint has been penalized by the company.

Gen. GREENE. Mr. Difenderfer, if you are dissatisfied with the price of a railroad ticket from here to Philadelphia, do you claim that you have the right to demand of the Interstate Commerce Commission that that price shall be reduced?

Mr. DIFFENDERFER. If the railroad company is breaking the law, I have that right.

Gen. GREENE. But we are not breaking the law. We are complying with the law.

A MEMBER. The difference is this: Any single citizen can complain about a discrimination, but he can not get the general schedule rates changed under the law of the city.

The CHAIRMAN. General, in order to simplify the matter as much as possible, let me ask you a few questions.

We have a treaty with Great Britain, and under article 5 of that treaty Canada has the right to divert 36,000 cubic feet of water per second and the United States has the right to divert 20,000 cubic feet of water per second for power purposes. If there is no legislation in this matter the treaty is self-acting, is it not?

Gen. GREENE. Yes, sir.

The CHAIRMAN. And the United States could then take the 20,000 feet for power purposes and Canada could take 36,000 feet per second for power purposes?

Gen. GREENE. Yes. As to the transmission of power from Canada, there is no reason why you should legislate. Prior to the 29th day of June, 1906, it was perfectly lawful to do what we were then doing—bringing power from Canada to the United States; on the 30th day of June, 1906, it was a crime to bring power into the United States from Canada unless we had the written permit of the Secretary of War.

Mr. KENDALL. Under the Burton Act.

Gen. GREENE. Under the Burton Act what was lawful on the 29th of June was a crime punishable by fine and imprisonment on the 30th day of June, and that was the object of this legislation. Therefore I answer your question as to the transmission of power from Canada—there is no reason for you to legislate at all.

The CHAIRMAN. The Burton law expires on the 1st of March of this year?

Gen. GREENE. Yes, sir.

The CHAIRMAN. The treaty is the supreme law of the land. There being no legislation, the people of the United States can take the 20,000 cubic feet per second and Canada can take 36,000 cubic feet per second, and the power can come in from Canada.

Gen. GREENE. As to the transmission, you should not legislate. As to the diversion of water, I think you will have to legislate as to who shall have this 4,400 feet; to whom it shall go and how. I supposed when I read that treaty that it was a matter the commission should decide. I understand now that the commission can not do anything with it. The War Department can not do anything with it. Apparently it is necessary to legislate as to who shall get this 4,400 feet.

Mr. SHARP. General, what proportion is that to the whole water that goes over the Falls—all the water?

Gen. GREENE. The average flow, as certified by the United States engineers, is 211,000 feet per second. The permissible diversion is about 56,000.

Mr. SHARP. I imagined that the flow was a great deal more than that.

Gen. GREENE. How many tons do you think that will be an hour? Two and a half million tons an hour.

Mr. SHARP. It seems to me that there is something in the claim that to diminish the flow would destroy to a certain extent the scenic beauty. It is large enough to make us go with caution.

Mr. KENDALL. It is a little more than one-fourth.

Gen. GREENE. That question was asked me in the last hearing, six years ago: What proportion of the water could be diverted without interfering perceptibly with the flow of the Falls? I answered: "About 40 per cent." I adhere to that opinion, and I have watched the Falls very carefully ever since. That would be 80,000 cubic feet instead of 56,000 feet. There are a great many other people who are very familiar with the Falls who have the same opinion that I have—that the effect would not be noticeable until you get to 40 per cent. Under Mr. Burton's law the 160,000 horsepower that he allows to come in would be somewhere between 14 and 15 per cent.

Mr. SHARP. About half.

Gen. GREENE. A little over half.

The CHAIRMAN. Now, General, to proceed, with whom do you think the power should be lodged regarding this additional 4,400 cubic feet of water?

Gen. GREENE. I think with the War Department, through the co-operation of the State of New York.

Mr. DIFENDERFER. Now, to whom shall it be given?

Gen. GREENE. I should say to that company which will satisfy the War Department that it will give the most power.

Mr. DIFENDERFER. The Alexander bill provided that it would give it to two companies. I want to know whether, in your judgment, that would be just?

Gen. GREENE. The Alexander bill followed Burton's bill in naming certain companies, but that bill is dead.

Mr. DIFENDERFER. I understand; but would it be fair to give that to both companies?

Mr. KENDALL. That is an ethical question; on that one man's judgment would be just as good as another's.

The CHAIRMAN. General, I understand you to say that the right to grant the permit for the additional power should be lodged with the Secretary of War, and the right to say who shall have it and fix the charges should be lodged with the public-service commission of New York.

Gen. GREENE. Yes, sir.

The CHAIRMAN. That is all the legislation required, in your judgment?

Gen. GREENE. Yes, sir.

The CHAIRMAN. Then the people of the United States could buy power either from the American companies or from the Canadian companies?

Gen. GREENE. Yes, sir.

Mr. LEGARE. General, do you know how many visitors are at the Falls in a year?

Gen. GREENE. Our record book shows about 5,000. I do not know precisely about the other companies, but I think they are fully as large; and they go through the works. That, however, is not the total number of people who go to the Falls.

Mr. LEGARE. But how many people have the pleasure of seeing the Falls?

Gen. GREENE. I was just asking if the president of the Gorge Railroad was here; but I think about 150,000.

A VOICE. A million and a half.

Gen. GREENE. Well, I should not like to say.

Mr. LEGARE. About a million and a half?

Gen. GREENE. Yes.

Mr. LEGARE. About how many people are benefited by the use of this power? How many people are supplied with light?

Gen. GREENE. About 2,500,000, and in Ontario about 1,000,000.

Mr. LEGARE. About 3,500,000?

Gen. GREENE. Yes, sir.

Mr. SHARP. I don't know whether it was debated in the Senate, but some years ago a prominent member of that body took up seriously the question of putting a dam above the Falls; and on account of the deepening of the canal there is a great agitation now to make the Chicago Canal navigable. What effect might come on account of this legislation? If the whole amount was diverted and in succeeding years there should be a decline in lake levels and this agitation should increase for diverting a larger amount, what would be the effect upon the flow from the Falls?

Gen. GREENE. The dam you speak of is now being considered by the International Waterways Commission, under the convention of 1902. They say they expect to arrive at their conclusion in about a year or less, and pending that report I do not feel qualified to say anything. You understand that the wind varies the lake levels to the extent of 14 feet.

Mr. SHARP. There is only about 14 feet difference clear around to Lake Erie.

Gen. GREENE. This 14 feet is at the Buffalo end, due to the east wind backing it up and the west wind blowing it down.

Mr. SHARP. Acts a good deal like the wind blowing over the lime kilns at Detroit.



Gen. GREENE. That is all. However, before closing I put on the desk these photographs. The earliest one is 1804. I would like to call the attention of the members of the committee to this. These are photographs of 1890 to 1900. I think, Mr. Cooper, in looking at the photographs of 1911, thought that that lack of water on Terrapin Point was due to the power companies.

Mr. COOPER. General, sometimes I don't know what to think about those photographs.

STATEMENT BY FRANCIS V. GREENE ON BEHALF OF NIAGARA, LOCKPORT & ONTARIO POWER CO., A NEW YORK CORPORATION, AND ONTARIO POWER CO. OF NIAGARA FALLS, A CANADIAN CORPORATION.

Mr. Chairman, the treaty between the United States and Great Britain in regard to the boundary waters of the United States and Canada was negotiated by Mr. Root, then Secretary of State, on behalf of the United States, and by Mr. Bryce, British ambassador, on the part of Great Britain; it was signed by them on January 11, 1909; the Senate of the United States gave its consent, under certain conditions, to its ratification by resolution dated March 3, 1909. The conditions imposed by the Senate delayed the ratification by Great Britain for a year, but it was ratified by Great Britain on March 31, 1910; by the President on the following day, April 1, 1910; the ratifications were exchanged at Washington on May 5, 1910, and the treaty was proclaimed by the President on May 10, 1910.

The fifth article of said treaty relates to the diversion of the waters of the Niagara River above the Falls, and is in the following language:

"The High Contracting Parties agree that it is expedient to limit the diversion of waters from the Niagara River so that the level of Lake Erie and the flow of the stream shall not be appreciably affected. It is the desire of both Parties to accomplish this object with the least possible injury to investments which have already been made in the construction of power plants on the United States side of the river under grants of authority from the State of New York, and on the Canadian side of the river under licenses authorized by the Dominion of Canada and the Province of Ontario.

"So long as this treaty shall remain in force, no diversion of the waters of the Niagara River above the Falls from the natural course and stream thereof shall be permitted except for the purposes and to the extent hereinafter provided.

"The United States may authorize and permit the diversion within the State of New York of the waters of said river above the Falls of Niagara, for power purposes, not exceeding in the aggregate a daily diversion at the rate of twenty thousand cubic feet of water per second.

"The United Kingdom, by the Dominion of Canada, or the Province of Ontario, may authorize and permit the diversion within the Province of Ontario of the waters of said river above the Falls of Niagara, for power purposes, not exceeding in the aggregate a daily diversion at the rate of thirty-six thousand cubic feet of water per second.

"The prohibitions of this article shall not apply to the diversion of water for sanitary or domestic purposes or for the service of canals for the purposes of navigation."

Two bills are now pending in the House of Representatives, to wit, H. R. 6746, introduced by Mr. Smith, of Buffalo, and H. R. 7694, introduced by Mr. Simmons, of Niagara Falls, the title of both bills being identical, namely, "To give effect to the fifth article of the treaty between the United States and Great Britain signed January 11, 1909." I understood it is the purpose of your committee to prepare legislation which shall be definite, final, and complete for the purpose of giving effect to Article V of the treaty, and that in preparing this legislation you will consider and reach a conclusion on the following questions:

(a) Is any legislation needed, or is the treaty self-acting?

(b) If legislation is needed, shall such legislation permit the diversion on the American side of all the water permitted by the treaty, or shall it restrict the diversion on the American side to the amount now diverted or to some other amount less than that permitted by the treaty?

(c) If the amount authorized by the treaty to be diverted on the American side, which is 4,400 cubic feet per second more than is authorized there to be diverted by the Burton law, how is the allotment of this additional 4,400 cubic feet per second to be determined; and what commission or department of the Executive Government is to determine this allotment and see that it is not exceeded?

(d) The treaty places no restriction whatever upon bringing into the United States the power generated on the Canadian side of the Niagara River. Is it desirable to place any such restrictions or is it better to allow the people of the United States to have the use of all the Niagara power that can be brought into the United States?

This matter has been before Congress for six years, but as this is the first time the matter has been brought before this committee it may perhaps save time and answer in advance a great many questions that would otherwise be asked, if I should state as briefly as possible the provisions of previous legislation and the situation at the Falls at the time that such legislation was enacted.

In the autumn of 1905 there were, then as now, four power companies<sup>1</sup> and five power houses at or near the Falls using the water from above the Falls. On the American side there were two New York corporations deriving their powers from the Legislature of the State of New York, namely, the Niagara Falls Power Co. and the company whose corporate name is now the Hydraulic Power Co. On the Canadian side there were three Canadian corporations, namely, the Ontario Power Co. of Niagara Falls, the Canadian Niagara Power Co., and the Electrical Development Co. (Ltd.). Three of these companies and four of the power houses and the works connected therewith were entirely owned by American citizens.

In 1905 the companies had made their plans and entered into contracts for the sale of the greater part or all of the following amounts of power, which by the laws then existing and by their agreements with the State and provincial authorities on both sides of the line they were fully authorized to make, as follows:

	Horsepower.
On the American side:	
Niagara Falls Power Co.....	85,000
Hydraulic Power Co.....	120,000
Total.....	205,000
On the Canadian side:	
Ontario Power Co.....	180,000
Canadian Niagara Power Co.....	110,000
Electrical Development Co. (Ltd.).....	125,000
Total.....	415,000
Total on both sides.....	620,000

The works of all of these companies at all five of the power houses were in various stages of progress, but all of them had been undertaken on plans calling for construction of the size above named, and all of them, as above stated, in compliance with the laws, ordinances, and franchises which had hitherto been granted by competent authority.

In the autumn of 1905 the statement was made in various papers that Niagara Falls had been partially ruined and soon would be completely destroyed by the power companies, and legislation was sought to preserve the Falls from this alleged danger. A bill for this purpose was introduced by Mr. Burton, then a Representative from Ohio and chairman of the Rivers and Harbors Committee, and after elaborate hearings during the session of six years ago this bill finally became a law on June 29, 1906. This law made it a misdemeanor, punishable by fine and imprisonment, to do certain things which up to the day before had been perfectly lawful. The things thus forbidden were:

(a) To divert any water from the Niagara River.

(b) To transmit any power from the Dominion of Canada into the United States without the written permit of the Secretary of War; and in granting such permits the Secretary of War was authorized to grant them for diversion of water on the American side only "to individuals, companies, or corporations

<sup>1</sup>There are two American and three Canadian corporations; but the Canadian Niagara Power Co. is entirely owned by the Niagara Falls Power Co., so that the number of independent companies is four.

which are now actually producing power from the waters of said river or its tributaries, in the State of New York, or from the Erie Canal," and to an amount in the aggregate not exceeding 15,600 cubic feet per second; and he was further limited in the matter of granting permits for the transmission of power into the United States by the provision "that the quantity of electrical power which may by permits be allowed to be transmitted from the Dominion of Canada into the United States shall be 160,000 horsepower."

The title of the law approved June 29, 1906, reads as follows: "An act for the control and regulation of the waters of Niagara River, for the preservation of Niagara Falls, and for other purposes."

In the hearings before the Rivers and Harbors Committee prior to the enactment of this law some question had been raised as to the right of Congress to control the waters of the Niagara River for any other purposes than that of navigation, and some doubt had been raised as to what particular clause of the Constitution gave to the Congress of the United States the right to enact legislation for the preservation of Niagara Falls. Therefore the fourth section of the law requested the President of the United States to negotiate with the Government of Great Britain "for the purpose of providing by suitable treaty with said Government for such regulation and control of the waters of Niagara River and its tributaries as will preserve the scenic grandeur of Niagara Falls and of the rapids in said river." These negotiations were promptly undertaken, and resulted in the treaty which was signed, ratified, and proclaimed on the dates above named.

As the act of June 29, 1906, was intended only to take care of the situation until the treaty should be negotiated and ratified, section 5 of the law enacted that the "provisions of this act shall remain in force for three years from and after the date of its passage." When the three years expired the treaty, although signed, had not been ratified by both parties, and therefore the provisions of the law were extended for two years, or until June 29, 1911. In the last session of the Sixty-first Congress resolutions were introduced for extending the Burton law, and bills were introduced for giving effect to the fifth article of the treaty, but none of them passed, and thus the Burton law expired on June 29, 1911.

On the last day of the special session, namely, August 22, 1911, a joint resolution was adopted reviving, reenacting, and extending the provisions of the act of 1906 to March 1, 1912.

One of the provisions of the Burton law of 1906 authorized the Secretary of War, in his discretion, to grant revocable permits for the diversion of water in excess of 15,600 cubic feet per second "to such amount, if any, as, in connection with the amount diverted on the Canadian side, shall not injure or interfere with the navigable capacity of said river or its integrity and proper volume as a boundary stream, or the scenic grandeur of Niagara Falls." In order that the Secretary of War might be advised as to the probable effect of these diversions and could intelligently exercise his discretion as to granting such revocable permits for additional diversions, instructions were sent early in 1907 to the officer in charge of the lake survey directing him to make observations and to report from time to time the result of such observations and measurements, so as to show the effect of such diversions upon:

- (a) The navigable capacity of said river.
- (b) Its integrity and proper volume as a boundary stream.
- (c) The scenic grandeur of Niagara Falls.

The reports made in compliance with these instructions have been transmitted to Congress and are embodied in Senate Document No. 105 and House Document No. 246, of the present Congress.

Briefly, the reports of the engineers are to the following effect:

(a) As to the navigable capacity, they say (Doc. No. 246, p. 12), that the diversions referred to:

"Will not injure or interfere with the navigable capacity of the Niagara River."

(b) As to the integrity and proper volume as a boundary stream they say (same page):

"It is not apparent that the river through these diversions has suffered."

(c) As to scenic grandeur (same page):

"It may be considered that the changes on the American Fall are unimportant."

In other words, the effect of the diversions does not interfere with the navigation of the Niagara River, does not injure its integrity and proper volume as a boundary stream, and does not injure the American Fall.

The engineers, however, report (H. Doc. No. 246, p. 13) that the effect of these diversions is to cause a lowering of Lake Erie which, though slight, in their opinion "Can not be considered negligible," and they also find that there has been a lowering at the eastern and western ends of the Canadian Fall, as to which they say:

"While natural causes have been chiefly instrumental in effecting these changes, it appears indisputable that the artificial diversions of the power companies have materially added to the 'injury or interference with the scenic grandeur of Niagara Falls.' Additional diversions, now contemplated, will increase this damage."

In other words, then, they find that these diversions have affected the level of Lake Erie and have contributed to the injury of the scenic grandeur of Niagara Falls, the greater part of which has been produced by natural causes.

As to the lowering of Lake Erie, it is measured in fractions of 1 inch. The calculations are of a most complicated, scientific character. So far as I know, this is the first attempt to study the hydraulics of a great river with a view to determining in specific quantities the effect upon the level of the lake which discharges into that river, of diverting a small portion of the flow at a point over 20 miles below the lake, during which distance the river falls about 11 feet. The result is extremely interesting from a scientific standpoint, but it can hardly be considered as final and conclusive; for whereas it has taken the observations of 40 years to determine within an error of 1 to 2 per cent the relation between the level of the lake and the volume of discharge of the stream, these results undertake to define the variation in the discharge of Lake Erie to within one-third of 1 per cent, and they are based upon two series of observations, each of 10 days' duration, during one of which the American power houses were shut down and during the other were in operation.

Theoretically the dropping of a stone into the pool of still water above Niagara Falls would create a ripple which would travel back to Lake Erie, and could there be measured in millionths of an inch if there were any instruments capable of such measurement. The measurements in this case are in fractions of an inch. The report of Gen. Bixby, Chief of Engineers, dated October 14, 1911 (p. 1114), says that the effect upon Lake Erie of the increased diversions since 1906 has been one-fourth of an inch. The report of Lieut. Col. Riché (H. Doc. No. 246, p. 12), says that the total effects of the present diversions are the lowering of Lake Erie  $1\frac{1}{4}$  inches. The report of Mr. Shenahon, principal assistant engineer (S. Doc. 105, p. 49), which accompanied Maj. Keller's report, dated November 30, 1908, says that "the measurements of the Lake Survey have shown with certainty that changes in outflow of the Niagara River have had no appreciable effect toward lowering Lake Erie in the past 10 years."

The sum and substance of these reports is, that while there has been a minute change in the level of Lake Erie, it is so small that it has had no appreciable effect upon navigation. This was the testimony of Gen. Bixby at your hearing on Tuesday last. The navigable waters of the United States are in the charge of the Army engineers, under the direction of the Secretary of War. These engineers are, on the subject of navigable waters and navigation thereon, the first experts in the country. I think your committee may safely dismiss from your minds any apprehension that the navigation on the navigable waters of the United States is in any slightest degree injured or affected by such diversion of water in the Niagara River as is permitted by the treaty now in force.

As to scenic grandeur, that is not a question of engineering. Engineers have reported that while there is practically no change on the American Fall, there have been changes on the Canadian Fall amounting to a lowering of 15 inches at the Canadian end and  $3\frac{1}{2}$  inches at the Goat Island end of that fall (H. Doc. No. 246, p. 13). Of this they attribute approximately two-thirds to the diversions of water and one-third to the breaking away of the apex of the Horseshoe Fall. They say that this has resulted in (H. Doc. No. 246, p. 13) "a marked interference with the continuity and length of crest line, unquestionably marring the natural beauty of this cataract."

The facts here stated, namely, a total lowering of 15 inches, are not disputed, although it should be noted that the gauge readings from which these facts are deduced show a variation of as much as 5 feet in the course of the year and as much as 3 to 4 feet in as many successive days. It probably will require a longer series of observations to determine with absolute certainty the precise extent, in inches, of the decrease in depth at the crest of the Falls due to the diversion of water for power purposes. Meanwhile, the determinations above quoted are the best we have and are not disputed.

As to the opinion formed by the engineers from a consideration of these facts, there is, however, a very wide difference. The Falls vary from day to day, according to the wind and the weather. An east wind will diminish the volume of the Falls by an amount greater than all the diversions of water for power purposes which are possible under the treaty. The bright sunshine in summer will bring forth that marvelous emerald tint at the point of greatest depth in the Horseshoe Fall concerning which so much has been written, and at the same time will show in dazzling white the purity of the American Fall. Cloudy days, rainy days, snowy days, all have their different effects, and frequently, in times of extreme low temperature at the close of a long winter, with much ice coming out of the lake, the American Fall is absolutely dried up, and people have walked across the bed of the river between Goat Island and the main shore. There is a well-authenticated case of this 50 or 60 years ago, before diversion of water for power purposes was ever thought of.

Now, the point that I would like to impress upon your minds is this: That the Falls vary in appearance from day to day and month to month and year to year; yet under similar circumstances of wind and weather there has been no change in their appearance which can be detected by the eye, except at the apex or point of the Horseshoe. At that point the crest is receding at the rate of over 5 feet per annum (S. Doc. No. 105, p. 32), and those of us who first saw the Falls 40 years ago can detect the change in the shape of the crest. It is more pointed now than it was then; but no other change is perceptible under the same conditions of wind and weather. It is the constant remark of visitors who come to the Falls that the appearance of the Falls is just what it was when they saw them years ago; or, by those who see them for the first time, the remark is one of surprise that the Falls are so beautiful in view of the statements scattered broadcast that they had been practically ruined. Several western governors recently visited the Falls and gave expression to these opinions.

Scenic grandeur appeals to the imagination, to the emotions; it appeals differently to different people. You will find all kinds and varieties of opinions concerning it, and you will also find many shades and varieties of opinions as to whether scenic grandeur should be allowed to interfere with the industries and prosperity of citizens of the United States. Lord Kelvin, several years ago, as I am told, expressed the opinion that if these Falls were needed for the benefit of mankind, all of their potential energy should be so utilized; and on the other extreme, Mr. McFarland, the president of the American Civic Association, would probably tell you that he thinks that a Nation which is rich enough to build the Panama Canal is rich enough to buy up every power plant at Niagara Falls, destroy them, and stop the use of a single drop of water for power purposes.<sup>1</sup> Between these extremes some compromise must be reached. The existing treaty was under negotiation for more than two years, and I imagine that the chief cause of delay was a desire to find a fair compromise. The language of Article V of the treaty intimates this. I believe it may fairly be taken for granted that the limitations named in the treaty are about right, and that the full amount of diversion on both sides of the river, namely, 56,000 cubic feet per second, can be taken without appreciably affecting the scenic grandeur of the Falls. This, however, is the very question which your committee is to decide, namely, whether the limitations of the treaty are to prevail, or whether further and additional limitations and restrictions are to be imposed.

In considering this question, however, I wish to call your attention to the fact—and I do not think this will be disputed by any intelligent man who is familiar with the subject—that the sole effect of any restriction on the bringing of power from Canada into the United States is to drive American industries into Canada. This restriction on transmission was inserted in the Burton law on the theory that if the power was not transmitted into the United States it could not be sold in Canada, and therefore in this way a limitation could be imposed on the use of Canadian water for power purposes. This theory is

<sup>1</sup> The opposing considerations as between utility and scenic grandeur are fairly well stated by the engineers in the following language (S. Doc. No. 105, p. 75):

"The great companies at the Falls have created in good faith power plants to lessen the hardships of human labor, to aid transportation, to illuminate the night hours, and to add to the wealth of two Nations. The power houses for the most part are architecturally excellent, harmonizing with the scenic surroundings, and the mechanical wonders wrought in solving the engineering problems of the utilization of this great head and volume of water rival as a spectacle the scenic grandeur of the Falls and add to the attractiveness of the region.

"It therefore appears proper to permit and foster such ultimate developments in addition to those already in force as are compatible with the perpetuation of the scenic grandeur appreciably undiminished."

entirely fallacious. At the time the Burton law was enacted only two of the Canadian power houses were in operation, and the total amount of Niagara power sold in Canada was less than 8,000 horsepower, as follows:

	Horsepower.
Ontario Power Co.....	250
International Railway Co.....	1,200
Canadian Niagara Power Co.....	1,340
<b>Total.....</b>	<b>2,790</b>

At the present moment the sales of Niagara power in Ontario are nearly 90,000 horsepower, as follows:

	Horsepower.
International Railway Co.....	1,500
Canadian Niagara Power Co.....	500
The Ontario Power Co.....	45,000
Electrical Development Co. (Ltd.).....	40,000
<b>Total.....</b>	<b>87,000</b>

In other words, there has been a growth in less than six years of from 3,000 to nearly 90,000 horsepower, and there is no sign of any abatement in this growth.

The three power houses on the Canadian side are situated in Queen Victoria Niagara Falls Park, a beautiful park which has been created from the proceeds of the amounts paid by these power companies to the government of Ontario by way of rental for the occupation of lands and payment for privileges granted. The agreements between the Ontario government, represented by the park commissioners, and the power companies provide that, if required in Canada, one-half of the power generated at these power houses shall be reserved for the use of Canadians. The other half can be exported to the United States. The charter of the Ontario Power Co. granted by the Dominion of Canada contains an express provision that its power may be transmitted into the United States, and this interpretation of the charter right has been explicitly stated in a decision of the supreme court of Canada bearing on this subject. This unlimited right to take the power to the United States, however, has been diminished to the right to transmit one-half of the power (instead of the whole) by the agreement with the park commissioners above referred to.

Now, the plans have been approved by the park commissioners for the construction of works of the following capacity:

	Horsepower.
Ontario Power Co.....	180,000
Canadian Niagara Power Co.....	110,000
Electrical Development Co. (Ltd.).....	125,000
<b>Total.....</b>	<b>415,000</b>

and, while none of the power houses is completed to that ultimate capacity yet, each of them is about two-thirds completed, and work is at the present moment progressing on the remaining one-third.

One-half of the total amount is 207,500 horsepower. In a little more than five years Canada has absorbed practically 90,000 horsepower of this. Undoubtedly it will absorb the remaining 117,500 horsepower. The amount which can be taken into the United States under the provisions of the contracts with the park commissioners is the remaining one-half, to wit, 207,500 horsepower. The Burton Act allows the transmission of 160,000 horsepower, so that all that is in question, if you remove every restriction in regard to the transmission of power into the United States, is 47,500 horsepower.

In 1906-7, after elaborate hearings, the Secretary of War, Mr. Taft (now President of the United States) allotted, under the provisions of the Burton Act, the 160,000 horsepower allowable to be transmitted into the United States as follows:

	Horsepower.
Ontario Power Co.....	60,000
Canadian Niagara Power Co.....	52,500
Electrical Development Co.....	46,000
International Railway Co.....	1,500
<b>Total.....</b>	<b>160,000</b>

The amount actually transmitted at present is as follows:

	Horsepower.
Ontario Power Co.-----	57, 000
Canadian Niagara Power Co.-----	122, 500
Electrical Development Co.-----	
Total -----	109, 500

The load of the Ontario Power Co. fluctuates from day to day and on any day may go to 60,000 horsepower, the full amount of the permit. The Canadian Niagara Power Co., having plants on each side of the river which are interconnected, is enabled to so operate them as to keep a steady load on its Canadian plant practically at the full amount of its permit.

It is probable that a representative of the Electrical Development Co. will be present to give the reasons why the permit granted to that company has not been utilized.

So far as the Ontario Power Co. in Canada and the Niagara, Lockport & Ontario Power Co. in New York State are concerned the situation is as follows:

We are now taking into New York 60,000 horsepower and distributing it among a population of more than 1,000,000 people, extending from Syracuse and Oswego on the east, through Auburn, Rochester, Batavia, Lockport, the suburbs of Buffalo, to Dunkirk on the west. If the restrictions on the transmission of power from the Canadian side are removed, we shall be able to increase the amount of power distributed through these various cities by one-half; that is, to 90,000 horsepower. If these restrictions are not removed this additional 30,000 horsepower will speedily be sold in Canada.

Referring then to the questions which I understand you are considering, which were enumerated at the beginning, and for convenience, may now be repeated as follows:

(a) Is any legislation needed or is the treaty self-acting?

(b) If legislation is needed, shall such legislation permit the diversion on the American side of all the water permitted by the treaty, or shall it restrict the diversion on the American side to the amount now diverted or to some other amount less than that permitted by the treaty?

(c) If the amount authorized by the treaty to be diverted on the American side, which is 4,400 cubic feet per second more than is authorized there to be diverted by the Burton Law, how is the allotment of this additional 4,400 cubic feet per second to be determined, and what commission or department of the Executive Government is to determine this allotment and see that it is not exceeded?

(d) The treaty places no restriction whatever upon bringing into the United States the power generated on the Canadian side of the Niagara River; is it desirable to place any such restrictions, or is it wise to make any such restrictions, or is it better to allow the people of the United States to have the use of all the Niagara power that can be brought into the United States?

I venture to suggest, in response to the courteous invitation of your chairman, that I be present and address the committee as follows:

Legislation is necessary.

The diversions of water on the American side should be not less than the amount named in the treaty. The allotment should be made by the Secretary of War after hearings and with the consent of the State of New York and the commissioners on the part of the United States in the international joint commission provided for by the treaty.

All restrictions on the transmission of power from Canada to the United States should be removed.

These are the provisions of the bill (H. R. 7694) introduced by Mr. Simmons, of the Niagara Falls district and now before you. They are identical with the provisions of a bill (S. 1940) introduced by Senator Root and now pending in the Senate.

The provisions of the bill (H. R. 6746) introduced by Mr. Smith, of the Buffalo district, differ in two respects:

(1) As to diversion, the Secretary of War is to issue the permit, but in one block to the State of New York, by whom it is to be allotted to the individuals or corporations who are to use it. This difference is a matter of form rather than substance, but I should think that the method named in Mr. Simmons's bill will prove a better working program than that named by Mr. Smith. The ultimate effect is the same.

(2) As to transmission of power from Canada into the United States, Mr. Simmons's bill, following the provisions of the treaty, is silent, and as the Burton resolution will expire with the enactment of the legislation you now have in contemplation, and as nowhere else except in the Burton act is there any restriction on bringing power from Canada into the United States, it follows that if you adopt Mr. Simmons's bill, all restrictions on bringing power from Canada into the United States (so far as United States laws are concerned) will disappear.

On the other hand, Mr. Smith's bill contains elaborate provisions the purpose of which was to insure that the consumer in the United States should pay no higher price for power than is paid by the consumer in Canada under like conditions and at equal distances from the Falls. I think that Mr. Smith's bill was drafted under a misapprehension as to the facts. I do not believe that he or any member of this committee intends that several millions of dollars of capital invested in good faith by American citizens shall be deprived of any return or profit whatsoever. Yet such would be the effect of Mr. Smith's bill if adopted. What has happened in the Province of Ontario is this: The Province has created a government body entitled "the hydroelectric power commission," with very extensive powers for the purpose of generating or buying and transmitting Niagara power to various municipalities in the Province, and the essence of the law is that there shall be no profit whatsoever to the commission. When the law was passed the commission considered the construction of its own power plants in which to generate power, but before taking any active steps in that direction it applied to the different power companies for prices, and after long negotiations it did make a contract with the Ontario Power Co. for such amounts of power, not less than 8,000 nor more than 100,000 horsepower, as it might require during a period of 30 years. The price named was, in the opinion of the commission, not much in excess of what it would cost them to generate their own power, and therefore they decided not to build their own power plant, but to make the contract above referred to. Having made this contract, the commission proceeded to borrow, on the credit of the Province, nearly \$4,000,000, and it sold its 4 per cent bonds at 102½. It entered into contracts with nearly 30 municipalities for varying amounts of power, and it is stipulated in each contract that the price which the municipality is to pay for the power is the sum total of the price paid by the commission to the Ontario Power Co., plus actual expenses of operating the transmission lines, interest on the bonds, sinking fund, maintenance, and depreciation, but without any profit whatsoever to the commission. The \$4,000,000 realized from the sale of the bonds was used to build stations and transmission lines to all the towns and villages between Niagara Falls and Toronto on the east and London and St. Thomas on the west.

You will thus see that the Ontario Power Co. sells to the Province of Ontario which is its landlord, a certain amount of power delivered at the wall of the powerhouse at the generator voltage; the same company sells to the Niagara, Lockport & Ontario Power Co. another amount of power at a distance of 6 miles from the powerhouse wall and at a voltage of five times the generator voltage. The Niagara, Lockport & Ontario Power Co. buys this power at the international boundary line and distributes it through about 450 miles of transmission lines in western New York, covering the territory between Syracuse and Oswego on the east and Dunkirk on the west, as above stated. In the purchase of land and the construction of stations and transmission lines, the Niagara, Lockport & Ontario Power Co. has invested nearly \$9,000,000. Its bonds bear interest at 5 per cent and they had to be sold at a considerable discount.

I trust that I have made it clear that the conditions on the two sides of the Niagara River are entirely unlike. On the one side is a Government commission owning the transmission facilities, which have been constructed on the credit of the Province of Ontario and on a basis of less than 4 per cent, and in pursuance of a law the fundamental principle of which is that there shall be no profit. On the American side is a commercial corporation covering nearly twice as much territory, whose transmission lines have been constructed with money costing practically 6 per cent. I am sure that this committee will not deny to the owners of the Niagara, Lockport & Ontario Power Co. a reasonable return upon their investment. The company has as yet paid no dividends on its stock. The interest on its bonds has been promptly paid, but the large equity in the property over and above the proceeds of the bonds has yet had no return whatsoever. This, I think, might be considered as one proof that its charges were not exorbitant. Another proof, perhaps equally convincing, is that while



this New York corporation operates the trolleys on nearly 500 miles of railroad and supplies the current for lighting and other miscellaneous public uses in many cities throughout western New York, no complaint has ever been made that its charges were not just, fair, and reasonable.

Now, I venture to suggest for the consideration of your committee that it is no part of the business of the United States to regulate prices on electricity within the different States. That is a subject which belongs to the States themselves, and the State of New York in particular has fully met the case by appropriate legislation. The first and most important act of Gov. Hughes's administration when he became governor of New York in January, 1907, was the creation of two public-service commissions, one for the city of New York (which contains about one-half of the population of the State) and the other for the rest of the State. The law is known as the public-service commissions law, and you will find it in the volume of New York Statutes for 1907. I have brought and now submit for the information of the committee a copy of the law in pamphlet form. You will find by referring to sections 71 to 75, pages 78 to 76, that the public-service commissions have full and complete power to regulate, fix, and establish the prices at which electricity shall be sold within the limits of the State of New York. If any municipality or any reasonable number of citizens are dissatisfied with the price at which electricity is sold, they can complain to the public-service commission, and it is then mandatory upon the commission to hear such complaint, to make a finding of fact, and if the finding be that the prices are unreasonable, then they are to fix a reasonable price, and the corporation which does not comply with their order is subject to heavy penalties. Ample provision is given in the law to enable the commission to carry its orders into effect.

The public-service commission of the second district, State of New York, has complete jurisdiction at every point in the State where Niagara power is at present being used or to which it can be transmitted. This law has been in operation now for nearly five years. It has given entire satisfaction, not only to the consumers of power and light, but, so far as the second district at least is concerned, to all the corporations which are under the jurisdiction of the commission.

In short, then, the State of New York has provided a tribunal with ample jurisdiction over the matter referred to in the provisions of Mr. Smith's bill. This tribunal is fully established. It is in operation. It has the confidence of the community of all classes, and incidentally, I may say it is now considering a complaint from the city of Buffalo that the prices at which electricity is sold in that city are unreasonable. No other complaint has been lodged with them from any other community which uses Niagara power. If such complaint should be lodged, they would immediately proceed, as they are required to do by the law, to hear it and to provide the remedy if on the hearing the complaint is sustained.

It will thus be seen that the State of New York has already enacted complete legislation for controlling the prices of electricity. It has established proper tribunals, clothed them with power to enforce their decrees, and established an administrative system which is now in full working order with satisfactory results to all concerned.

FRANCIS V. GREENE.

JANUARY 18, 1912.

#### STATEMENT OF EDWARD T. WILLIAMS.

Mr. WILLIAMS. I am from Niagara Falls. I represent the city of Niagara Falls. I am here simply to say upon the authority of the mayor of Niagara Falls that we living at Niagara Falls and along the Niagara River regard ourselves as the most jealous guardians of the scenic beauty of this great cataract and that, having seen this power development from its inception, I am of the opinion that there has been no appreciable effect upon the flow of the river or upon the beauty of the falls. The attitude of the city of Niagara Falls is that it believes that water can be diverted up to the limits proposed or incorporated in the treaty without having any appreciable effect upon the flow of the river or upon the beauty of the falls.

Mr. Chairman, that is practically all I have to say.

The CHAIRMAN. I would like to ask you a couple of questions. The people of Niagara Falls, as I understand it, have no objection to the Government giving this additional 4,400 feet?

Mr. WILLIAMS. That is their position, as I understand it.

The CHAIRMAN. And they would like to have the restriction regarding the importation from Canada removed?

Mr. WILLIAMS. Yes, sir.

The CHAIRMAN. You doubtless have looked over both bills before this committee. Which bill do you prefer?

Mr. WILLIAMS. Why, I have not reached any conclusion in the matter. I am simply here to say on behalf of that city that we desire the treaty to be fulfilled.

Mr. LEGARE. One of your principal duties is to bring conventions to Niagara Falls to see the place?

Mr. WILLIAMS. No, sir; no, sir; to encourage industry.

Mr. COOPER. It is a matter of industrial and commercial development, is it?

Mr. WILLIAMS. Yes, sir.

The CHAIRMAN. There is more or less typhoid fever at Niagara Falls, is there not?

Mr. WILLIAMS. There has been some.

The CHAIRMAN. And that is on account of the pollution of the waters?

Mr. WILLIAMS. Yes, sir.

The CHAIRMAN. How, in your judgment, could that best be stopped?

Mr. WILLIAMS. I would say that the city has now installed a new water works and filtration plant which has had some good effect and will have more.

The CHAIRMAN. Do you think it would be a good idea for Congress to confer upon the National Waterways Commission the right to do everything in its power to stop the pollution of the waters between Canada and the United States?

Mr. WILLIAMS. I am in favor of stopping not only the pollution of the waters between Canada and the United States, but also the waters of Lake Erie.

The CHAIRMAN. And that is very important?

Mr. WILLIAMS. Yes, sir.

The CHAIRMAN. If you have any views upon that subject, we would like to have you give them to the committee.

Mr. WILLIAMS. I think—I have been here before to confer with the Surgeon General of the Army—

Mr. COOPER. For what purpose?

Mr. WILLIAMS. For the stoppage of the pollution of the waters.

The CHAIRMAN. And the consequence is that in Erie, Pa., for instance, the people have epidemics of typhoid?

Mr. WILLIAMS. Yes, sir; we think that is an uncivilized way to dispose of sewage.

Mr. COOPER. Berlin derives large revenue from its sewage system.

Mr. WILLIAMS. Yes, sir.

**STATEMENT OF MR. MORRIS COHN, JR., OF NIAGARA FALLS, N. Y.**

Mr. COHN. I represent, as counsel, the Hydraulic Power Co. of Niagara Falls. That company is the owner of the hydraulic canal, which was constructed in about the year 1853, and this company and its predecessors have been conducting power works under a claim of riparian rights ever since without criticism, except that the State of New York, claiming as a riparian owner, made some objection to the use of water without its permit and it, as has been stated, gave by grant to the Hydraulic Power Co. the right to take such water as would be necessary for the purposes of its canal.

Mr. COOPER. You have not been generating electric power all the time during that 50 years?

Mr. COHN. No, sir.

Mr. COOPER. What was it before that?

Mr. COHN. Just mill rights; hydraulic power and mill race. The plant of this company is the oldest along the Niagara River. It has the greatest equities and interests in this legislation; it has as lowest riparian owner the strongest legal rights; and therefore I think it is quite proper that it shall have the least to say.

In 1902 the International Waterways Commission was authorized to investigate the subject of Niagara River power development.

In 1906, as the forerunner of the Burton Act, the International Waterways Commission made a report, in which it recommended that the Secretary of War be authorized to grant permits for the diversion of 18,500 cubic feet of water per second and no more from the waters naturally tributary to Niagara Falls. It was recommended in that report that 18,500 cubic feet per second be allowed to be diverted at Niagara Falls, as that could be allowed without injuring the scenic beauty of the Falls, and of that amount 9,500 cubic feet per second be allowed my client. It also recommended that 36,000 cubic feet should be diverted on the Canadian side. The matter coming before the Rivers and Harbors Committee of this House, they made a report in which they recommended that, instead of 18,500 feet, 15,600 feet be so diverted. The result of it was that the Niagara Co. got 8,600 feet and the Hydraulic Co., instead of getting 9,500 feet, got 6,500 cubic feet per second.

In a report which accompanied the bill it was stated that the final settlement of the matter must rest until the result of diplomatic negotiations be embodied in a treaty, but that it was, however, necessary that legislation should be enacted to furnish a basis for diplomatic action. That was all that the Burton Act was intended to cover—to hold the matter in statu quo until the respective countries could get together and confer about a treaty.

Section 4 of the Burton Act provides:

That the President of the United States is respectfully requested to open negotiations with the Government of Great Britain for the purpose of effectually providing, by suitable treaty with said Government, for such regulation and control of the waters of Niagara River and its tributaries as will preserve the scenic grandeur of Niagara Falls and of rapids in said river.

Negotiations have ripened into a treaty and the Burton Act still remains. We think that it is unfair that this act should remain on the statute book after the purpose it was intended to serve has been accomplished. The act provided specifically that it should be in

effect for the term of three years, and then it was continued for two years more. So that it was never the purpose of the law that we should be deprived forever of the right to apply for additional water. The temporary reason having gone by, Congress should discontinue the act.

Mr. COOPER. How much water did your company divert 20 or 25 years ago?

Mr. COHN. Oh, a very much less amount. It was not until after the electrical development that the diversions became large; I don't know; I would not say exactly how much.

Mr. COOPER. Before the State of New York took action, were you at any time using as much as you are using now?

Mr. COHN. Oh, no; the growth of electrical development has increased the use of water.

Mr. COOPER. How far above the precipice do you divert the waters?

Mr. COHN. Port Bay, three-quarters of a mile above the Falls. Passing the question of whether we have the legal right, which has been argued here so forcibly (and, I think, well), because we have for years diverted water as riparian owners, and as the Supreme Court of the State of New York has said, that was a corporeal hereditament which was like a rock or a tree, we say Congress should give to some tribunal the right to grant permits to the amount of the additional 4,400 cubic feet per second.

Mr. COOPER. What competition is your company getting on the American side with any other company?

Mr. COHN. We are in direct competition with the Niagara Falls Power Company.

Mr. COOPER. Both use the water?

Mr. COHN. Yes, sir.

Mr. COOPER. Is there any competition as to the volume of business or as to the rates charged?

Mr. COHN. I think both. I think the people who come to Niagara Falls for electric power go to one company and then to the other, and make the best bargain they can.

Mr. COOPER. Is there any identity on the board of directors?

Mr. COHN. No; not the slightest.

Mr. COOPER. There is a competition?

Mr. COHN. Well, a competition as competition goes in such matters.

Mr. COOPER. You would not call it real, fierce, cutthroat competition? [Laughter.]

Mr. COHN. I don't think there is anything like that. I think it would be absurd when they make contracts for 20 or 25 years. People might go into cutthroat competition for 20 days.

Mr. COOPER. Has your company been prosperous financially?

Mr. COHN. Very.

Mr. COOPER. So that you don't need the additional water to enable you to succeed financially?

Mr. COHN. No, sir; I don't say that. I say that while we can do without it, the people need it.

Mr. COOPER. And at the same time you say it would not hurt the Falls?

Mr. COHN. The 4,400 feet, let me explain, comes from the same place that any diversion would come from on the Canadian side, and it is perfectly absurd to allow the Canadians to develop to the extent of 36,000 feet and say that the Americans shall not take 20,000 feet.

Mr. GARNER. That is the point I am glad you brought out.

Mr. COHN. It all practically comes from the Canadian side. There is no report of any engineer which says that any diversion on the Canadian side affects the American Falls. Now, the water at the apex of the Falls is nearly 18 feet deep. Who could look at it and tell whether it was 10 feet deep or 8?

Mr. COOPER. There is a black rock—

Mr. COHN. That has always been so.

Mr. COOPER. The point is, how far can you go? The only question is how far can you go?

Mr. COHN. That is the point; the people of Niagara Falls are just as anxious to preserve the scenic beauty of the Falls as anybody else. There are many people who are dependent on the traffic caused by the tourists coming, and yet favor this legislation. I have in mind the Gorge Railroad, which was represented here day before yesterday. There is no one who understands the situation who says the Falls are going to be ruined if this additional diversion is permitted.

Mr. GARNER. Well, you do appreciate the caution?

Mr. COHN. I think that is proper. This matter has been before Congress for a number of years, and I think it has been very cautious.

Mr. DIFENDERFER. To whom do you furnish this power? Do you sell any of it directly to the consumer in the city of Buffalo?

Mr. COHN. No, sir; we do not transmit any of it outside of Niagara Falls. It is only used for the immediate market.

Mr. DIFENDERFER. You do not furnish any power to any other transmitting company?

Mr. COHN. Not in the city of Buffalo. Just in the city of Niagara Falls; we just sell it to distributing companies in the city.

Mr. LEGARE. I see here article 5 goes on to say:

It is the desire of both parties to accomplish this object with the least possible injury to investments which have already been made in the construction of power plants on the American side of the river, and on the Canadian side of the river in the Province of Ontario.

Have you given any thought to that part of the treaty, as to any legislation we may pass as to limitation of importation of power from Canada into the United States? Do you catch my idea?

Mr. COHN. I do not.

Mr. GARNER. I understand that the law of Canada is to the effect that you can only import one-half of the power created over there—so that they have to make laws protecting their interests?

Mr. COHN. Yes, sir.

Mr. LEGARE. Yes; but suppose we should pass some law prohibiting that, wouldn't it be in conflict with this treaty?

Mr. COHN. Your point is that if we continue this prohibition we are running contrary to the treaty?

Mr. LEGARE. That seems so to me.

Mr. COHN. You will excuse me from talking about prohibition of importation. That is for the other fellows to talk about. I am not interested in the question of importation from Canada, because the

more that is imported the more it comes into competition with us. I am not quite through. I just want to say that in Gen. Greene's printed statement here, on page 8, he gives conditions on the Canadian side and conditions on the American side. On the American side he gives the actual development, and on the Canadian side he gives the authorized development. He says, "The hydraulic company is authorized to develop 120,000 horsepower," but that statement is not exactly as I understand the facts to be.

Gen. GREENE. That was what I understood you to create. That was 120,000 to 130,000 horsepower. That's the impression I intended to convey, but possibly I have conveyed a wrong impression. That is what you have produced.

Mr. COHN. You will find that any request to our company that has been made by the government officers or the scenic preservation committee has been made promptly and satisfactorily honored.

Mr. COOPER. What is the plan of the establishments using your power?

Mr. COHN. Oh, we sell power to the Wm. A. Rogers Co., silver platers; to the Carter-Crume Co., which makes check books; the Electro-Metallurgical Co.; the United States Light & Heating Co., which makes batteries—there are about 60 customers.

Mr. COOPER. How many of those are 24-hour companies?

Mr. COHN. Practically all of them—all the large users. If they can use the power 24 hours a day that makes it economical. Some of those plants could never have been established without the 24-hour service. Now, as to this point about the peak of the load, that has been mentioned. The language of the treaty, which is in the Smith bill, is intended to cover the larger use between the hours of 6 and 8 o'clock in the evening, when railway and lighting service is heaviest, but Mr. Barton can speak better than I can on that.

Mr. DIFENDERFER. What is the minimum charge to those 24-hour plants?

Mr. COHN. I don't know that I am fully acquainted with that except as to some contracts I have drawn in late years. It varies according to the manner of its use. If they take on the kilowatt-hour basis, that is one rate; if it is taken for 10 years, that is another rate; and if it is taken in horsepower quantities, that is another rate.

Now, the public-service commission of the State of New York had a meeting at Albany the other day in which it was decided that the electrical companies shall file rates the same as railroad companies.

Mr. DIFENDERFER. Could you give us the minimum charge on the horsepower basis?

Mr. COHN. About \$16 to manufacturers.

Mr. DIFENDERFER. Then there is a maximum rate?

Mr. COHN. I don't think I have drawn any contracts higher than \$16 or \$18. Perhaps I had better be entirely frank and say that there are one or two companies using large amounts that have a substantially lower rate. Now, the public-service commission is going to compel us to file rates the same as railroads.

Mr. GARNER. The power companies then are entirely satisfied with the commission and with its workings, up to date?

Mr. COHN. They have got to be. [Laughter.]

Mr. DIFENDERFER. And you are entirely satisfied with the rates laid down?

Mr. COHN. Well, we are not kicking about that. Those who are in favor of bankrupt corporations have different views from ours.

The CHAIRMAN. Mr. Cohn, if you have any data that you desire to submit as a part of your remarks, you may submit them.

Mr. COHN. Not at all. We want some legislation and that is all.

The CHAIRMAN. In regard to the disposition of the 4,400 feet of additional water, do you think the power should be lodged in the Secretary of War or in the public service commission of the State of New York?

Mr. COHN. I think that we ought to have it. [Laughter.]

The CHAIRMAN. Yes; but who should dispose of it?

Mr. COHN. I haven't any choice or any views. We think that we ought to have it anyway.

A MEMBER. You would not advise Congress to legislate that you should have it?

Mr. COHN. I don't think that. I stated a year ago that we should have it.

The CHAIRMAN. But if you can not have it, you are willing that somebody else should?

Mr. COHN. I say it would be very unfair on the part of Congress to legislate for navigation or national defense, or even for the benefit of scenic beauty, and under guise of such purpose attempt to take away from us what is ours at common law, and turn it over to someone else.

Mr. COOPER. Do you think a commission should be created to establish rates?

Mr. COHN. Well, we have one in New York.

Mr. COOPER. Do you think it is a good idea to sell to a 20,000-horsepower consumer at a less rate?

Mr. COHN. Yes, sir.

Mr. COOPER. Why, he could manufacture his gas for less?

Mr. COHN. I don't think there is any competition in that business.

Mr. COOPER. Not there; that is one of the reasons. [Laughter.] That is exactly what was the trouble with railroad rebates. The great big fellow drove the other fellow out of business any time he wanted to.

Mr. COHN. That certainly is rectified for the few by the public-service commission of the State of New York; but if a man comes to us and says: "Here, I want to buy power," it has been a question of individual bargaining.

The CHAIRMAN. Thank you, Mr. Cohn. We will now hear from Mr. A. C. Morrison, of Chicago.

#### STATEMENT OF MR. A. C. MORRISON.

Mr. MORRISON. I represent the Union Carbide Co., of Niagara Falls. I am neither engineer nor lawyer, but my company is a user of the power at the Falls and has been a rapidly developing user of power there. I can not speak for the electric-furnace industry as a whole, but I think it is fair that I be allowed to bring before this committee a general picture of the electric-furnace industry, especially as I believe that my company is the largest user of power at Niagara Falls, which is the center of electric-furnace development in this country. We have developed in the last few years very rap-





[illegible]

246'  
above sea level

**FT. NIAGARA**  
**YOUNGSTOWN**

# GREATER BUFFALO — AND THE ERIE AND ONTARIO SANITARY CANAL

**LEWISTON**

**NIAGARA FALLS**

## LA SALLE

# GRAND ISLAND

# CANADA

# BUFFALO

LAKE  
ERIE

573'  
above  
sea  
level

**NEW HARBOUR**

NEW

**OLCOTT**

**E. & O. S. C. Co.**

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idly, from a very small beginning to our present status. I think it is fair to state that our power requirements are increasing several thousand horsepower per annum. The problem of securing that additional power is a grievous one. Water power seems to be more theoretical than practical. Water power, located advantageously, as is the case at Niagara Falls, where vast quantities of raw materials can be economically assembled and distribution of finished products easily accomplished, is an essential strategic advantage to the very heavy and important electric-furnace industry—at Niagara Falls especially, because of the opportunity which their superb development gives the American manufacturers to meet foreign competition and develop exports.

The electric-furnace industry was born of the last very few years, and it has grown from a crude beginning to a very powerful factor in the advance of American manufactures, and is essential in some lines to American commercial success. Its development is continually increasing, and new uses for the products of the electric furnace are being discovered almost daily. My company's product has become a very widely distributed necessity—so wide, indeed, that there is hardly a town in the country that does not use carbide of calcium. When I state to you gentlemen that millions of people besides those near the Falls are being benefited by the beneficent use of this water power; that 200,000 country homes, several thousand hotels, and over 300 villages are illuminated by calcium carbide made at Niagara Falls; and that it is really bringing the educational and economic influence of a brilliant and beautiful illuminant into the farm home and country village, the dark depths of the mine, the buoys and beacons of our coast line, and the lights of our engines and our automobiles, you will understand that perhaps the benefit is not confined to the limited circle of 2,000,000 people who draw light or power directly from Niagara Falls.

So, to sum up: This question of power has become extremely difficult. We have reached the limit of securing large units of power at Niagara Falls, and if a limitation is placed upon the waters of Niagara Falls which may be diverted we shall have to seek elsewhere, and the search for American power properly located to meet commercial conditions is a strenuous one. The most advantageous thing we can do is to establish a plant across the river, where we can keep our management, assembly, and distribution intact. I am authorized by my company to say that, provided the limitation fixed by the Burton law is not taken off, or provided that we can not get power from Canada, we will be forced to become a Canadian institution.

Mr. COOPER. Is your institution connected with the carbide industry of the "Soo"?

Mr. MORRISON. Yes, sir.

Mr. COOPER. Are you using all your resources?

Mr. MORRISON. Owing to the riparian-rights question, lake-level regulations, and the disputes over it—the suits and a multitude of legal tangles which have held development there in check—instead of getting the 20,000 horsepower contracted for we have been cut down so that 7,500 horsepower is our full average from that otherwise splendid source of power. The water has been and is still running

to waste instead of building towns and feeding thousands of human beings.

Mr. COOPER. How much power would you get if you had the full amount?

Mr. MORRISON. Our contract calls for 20,000 horsepower, but we could get 40,000 if it was developed, but we have never been able to get more than about 7,500. The ramifications of this electric-furnace industry are enormous. We all know some of the many varied uses of electricity, but there are greater developments coming. There is the use of electricity in the steel industry, new metals which add to the wearing power of rails and thus facilitate transportation, so that these industries are being born within industries, and new uses are in process of being born, and many of them have already developed into substantial and permanent entities. There is one wonderful thing, a child of the electric furnace, and that is that the nitrate industry—that is, getting nitrate from the air and putting it into the form of fertilizers, which in European countries is already very large; indeed, it has developed very rapidly in this country, so that in five years contracts abroad have aggregated 200,000 horsepower, and this vast amount of power is now being used for the benefit of agriculture, and thus the whole people. The Chilean niters are limited. This country in its water power has the solution of the nitrate problem, the problem of preserving the fertility of our soil. We are told that we are importing more than ever. As soon as the soil becomes exhausted the nitrates become necessary, and it is practically settled that the electrical industry must solve the nitrate question. This vast need must be met. Niagara Falls has a growth that is as much beyond European dreams as the Falls themselves surpass European imagination.

Mr. DIFENDERFER. From whom do you get this power?

Mr. MORRISON. The Niagara Falls Power Co.

Mr. DIFENDERFER. Are any of your stockholders interested in the Niagara Falls Power Co.?

Mr. MORRISON. I think not. I believe it is a correct statement to say that they are not connected with it in any way.

Mr. DIFENDERFER. Would you be prepared to state what you pay for your power?

Mr. MORRISON. I would hesitate to do so. I assume that could be easily ascertained. Some of the power companies could tell you.

Mr. COOPER. Mr. Morrison, this may be a little foreign to the matter before us, but what do you think of the water development in the great gorges of the West?

Mr. MORRISON. It is true there is great theoretical possibility there, but I desire to refer back to my general statement that the utilization of water power is more theoretical than practical. Freight and water transportation and nearness to markets is sometimes—almost always, in fact—the necessarily deciding factors in the ultimate question of the utilization of water power. For illustration: In Norway and Sweden—especially in Norway, where much nitrate carbide and steel is manufactured—the water power comes right down from the top of the mountains to the sea and the ships dock in deep water right there at the foot of the mountain, where the works are located. Water power is so cheap there that I believe I can state that rates are \$8 to \$10 per horsepower year as against the very much higher

rates American power can be developed for. It requires a good location and American genius to exist against such amazing competition.

Mr. COOPER. And you have been employing American labor all the time?

Mr. MORRISON. Yes, sir. I wish to emphasize one thing, and that is this, that if the embargo against the importation of Canadian power is not lifted we will be obliged to use Canadian power in Canada, and thus, in part at least, become a Canadian institution employing Canadian labor; so that we are decidedly in favor of removing that embargo as we are good Americans.

The CHAIRMAN. Is there any reason why Congress should not refer this to some commission to fix the rates?

Mr. MORRISON. Well, we have no objection whatever to any regulation of rates that is fair and equitable. We are buyers of power and users of power.

The CHAIRMAN. The committee will now hear Mr. Millard F. Bowen, of Buffalo, N. Y.

#### STATEMENT OF MILLARD F. BOWEN.

Mr. BOWEN. I am from Buffalo, N. Y. I represent the Erie & Ontario Sanitary Canal Co., a corporation of New York State. I would ask the consideration by the members of the committee of the course of the canal pictured on this map, which is taken from the Government sheets. I am the organizer and president of the company that is to accomplish this work.

Mr. COOPER. What company is it?

Mr. BOWEN. The Erie & Ontario Sanitary Canal Co., organized two years ago last fall.

Mr. GARNER. For what purpose?

Mr. BOWEN. The purposes mentioned in the charter are very broad.

Mr. COOPER. The general purpose. Can you state what the purpose of your company is without stating what is in the company charter?

Mr. BOWEN. Not only to provide a canal for sanitation and navigation, but also that the water shall be used for power, the right of way for warehouses along the line of the canal, or any business purpose under the laws of New York.

Mr. DIFENDERFER. What is your capital stock?

Mr. BOWEN. One hundred thousand dollars, unwatered.

Mr. COOPER. You propose getting some of that water power that is now used by some outside consumers?

Mr. BOWEN. All of the water used under the treaty is what would be necessary to make this a commercial success. The 4,400 feet allowed for power under the treaty can be added to by a provision of the treaty that I will read, so that there can be no misappreciation of the scope of this.

Mr. COOPER. Would that abridge the vested rights of those riparian owners if you get the surplus? The statement was made this morning that the companies already existing have the right of riparian owners.

Mr. BOWEN. As riparian owners they can take any amount opposite their own holdings. We will turn backward all the streams

that run into Niagara River, at or near Buffalo, and stop all of the floods; we shall make the waters of Niagara River as pure as nature intended them to be.

Mr. COOPER. How much is the capital to be?

Mr. BOWEN. Thirty million dollars, to be raised by sale of bonds.

Mr. GARNER. You mean to say, then, that your corporation gets permits from the Government and then sells its rights to somebody else?

Mr. BOWEN. Not at all. We will serve the public free with this canal for the purpose of sanitation, giving to all the people on the Niagara frontier free sewage disposal and free flood abatement, and also we will give Buffalo City a thousand feet of dockage, and a maximum kilowatt-hour rate which will be on the same basis as the Ontario rate—4½ cents per kilowatt-hour.

Mr. GARNER. A very laudable ambition indeed. But you don't propose to do all of this with a capital of \$100,000?

Mr. BOWEN. My dear sir, in Albany the other day a trolley company agreed to issue bonds for the full extent of its construction. The income proved by that trolley company was so sufficient to pay for the charges that the public service commission gave them the right to go ahead and issue the bonds for the full amount. Our finances are to be obtained for this enterprise from the sale of bonds. The stock necessary to be sold is only necessary for the promotion of the business.

Mr. COOPER. Is all this stock paid for?

Mr. BOWEN. It is not; it is only being sold as necessity arises.

Mr. COOPER. But you anticipate it will take all that amount?

Mr. BOWEN. Yes, sir; 170,000 horsepower of electricity can be developed from the 312 feet of fall that we obtain. The same amount that we ask for, if used by another company, would not come within a very small percentage of what we can generate. By reason of the extraordinary conditions of the frontier we can use this water three times over, and obtain 28 horsepower from every cubic foot of water.

Mr. GARNER. In your navigation feature wouldn't you be in competition with Montreal?

Mr. BOWEN. No; because the United States has passed on five different studies for a ship canal between Lakes Erie and Ontario and has turned them down on the ground that it would help Montreal more than New York. Therefore navigation in this canal would stop at the barge canal, and would take the barge traffic and would send those barges through to New York without going down the Niagara River, and vice versa, save passing up the river from Tonawanda, where the current is swift. No provision for an inner canal has been made by the State, and the river has to be used for that purpose.

Mr. LEGARE. How much water do you propose to use?

Mr. BOWEN. Six thousand. In order to make it a success it is necessary to take 1,600 feet per second in addition to the 4,400 feet, that being especially for sanitation and navigation, which is less than the percentage that has been allowed for dilution at Chicago. This study has been a study for years with me, and I have taken up all the data I have obtained since I organized the Manufacturers' Club of Buffalo. Many manufacturers came to Buffalo, and were turned away because there was not enough power, and because the

prices were excessive, and because factory sites with both rail and water connections are scarce and expensive.

Mr. DIFENDERFER. How long is this canal?

Mr. BOWEN. Forty-two miles.

Mr. DIFENDERFER. Then you would discharge into Lake Ontario?

Mr. BOWEN. After the sewage is taken away from the water.

Mr. DIFENDERFER. What is your proposition for the disposition of the sewage?

Mr. BOWEN. That is similar to the proposition of the drainage canal of Chicago. The drainage canal there has been in operation for 12 years.

Mr. DIFENDERFER. You would then drain the pure water into Lake Ontario?

Mr. BOWEN. Without any appreciable contamination. The effect of the experience of the Chicago Drainage Canal has been that in all of their years of operation the contamination is never appreciable—that all of the sewage matter disappears in the form of gas. The chemists who have examined the water there find that at Lockport, which is 32 miles from Lake Michigan, half of the sewage matter has disappeared, and no trace remains 48 miles from Lake Michigan.

In our canal, with a greater dilution of water, and with a less amount of sewage to drain into it, the flow of 42 miles will naturally, for many years to come, purify the water coming into it. Between Lockport and Lake Ontario there will be two large reservoirs for the dams below Lockport. If the State of New York finds that there is any contamination we will be compelled by the Health Department of the United States and the State board of health to treat the water in such a way as to satisfy them that there is no contamination.

Mr. LEGARE. Under what clause of the treaty?

Mr. BOWEN. In article 4 of the treaty, and in article 5, the last clause.

The CHAIRMAN. Mr. Bowen, in that connection, do you think it would be advisable to give the International Boundary Commission authority to prevent the pollution of the waters?

Mr. BOWEN. They say they will have to get that authority. They don't want to take up the authority even in such a matter as this until you give them the points upon which to pass. In other words, they will be in the attitude of agreeing to the proposition that will be sent up by you or any department of the Government.

Now, in article 8 you will find a very strong argument in favor of this plan. The third clause begins this way:

The following order of precedence shall be observed among the various uses enumerated hereinafter for these waters, and no use shall be permitted which tends materially to conflict with or restrain any other use which is given preference over it in this order of preference:

- (1) Use for domestic and sanitary purposes;
- (2) Uses for navigation, including the service of canals for the purposes of navigation;
- (3) Uses for power and for irrigation purposes.

George Clinton told me that he was told to make this treaty broad and comprehensive and to take away technicalities, so that there should be the broadest interpretation of the treaty for both sides of the boundary. So far they have not passed upon the rules, but the

International Joint Commission, established under the treaty, are still uncertain of their powers, but I think when they get into the matter their powers will develop.

Now, in order that I may have something to talk on, from a viewpoint of the bills that are before this committee, I have certain suggestions to make in regard to the wording of the preamble of both bills. First, in the bill (H. R. 7694) introduced by Mr. Simmons, why not strike out "fifth article of the" and leave it, "to give effect to the treaty," and not confine it to a simple interpretation of one article? That article is limited.

Now, in line 3 of the Simmons bill I would insert, after the word "from," the words "Lake Erie in Erie County, New York, or."

It was asked me by Chairman Tawney the other day whether this water taken from the head of the river could be construed as water taken from the river under this treaty. I interpreted it this way. Right at the head of the river there enter into the river an average of 220,000 cubic feet per second. If we take part of that away, it is taking water from Niagara River, although technically it might be at the head of the river. Now, from the sanitary point of view, right there, half of the 6,000 feet ought not to go into Niagara River or Lake Erie. A year ago the marine hospital sent Dr. McLaughlin to make an examination. Dr. McLaughlin has been called before your committee, and he may explain his report. It says that 160,000,000 gallons of water a day flow back into the river, polluted, from Buffalo alone.

The CHAIRMAN. I want to say that Dr. McLaughlin was here, but he could not wait, so he will come before the committee next Tuesday.

Mr. BOWEN. Let me point out some of the principal points, then, and he will go into the details. That 160,000,000 feet ought never to go back into the river polluted. That does not include stream waters that are polluted, so that polluted stream waters, together with other polluted waters that flow back to Niagara River can be said to be more than 3,000 cubic feet per second.

The CHAIRMAN. To give this authority to the International Boundary Commission we would have to put in a new bill.

Mr. BOWEN. I think that they would accept your putting into this bill "the use of 1,600 feet for sanitary purposes." That is the provision of article 4. The commission say that it only needs some action on the part of Congress.

The CHAIRMAN. Then you desire to have that in the pending bill?

Mr. BOWEN. Yes, sir; so that the sanitary feature of this bill can be passed upon by the international commission. Now, then, all that we are asking for, practically, is 3,000 cubic feet to dilute the sewage of the frontier, in addition to the 3,000 cubic feet that ought never to enter the lake and river in a polluted condition.

The CHAIRMAN. How far would that extend west? You say that it would be sufficient to prevent the pollution of the waters between Canada and the United States?

Mr. BOWEN. Yes, sir. The east end of Lake Erie and Niagara River. This report shows that the sewage of Cleveland, Erie, and even of Dunkirk, is taken care of in the waters of Lake Erie, so that the dangers are very remote at Buffalo, as Dr. McLaughlin says. Therefore, taking all the streams south of Lackawanna, and even

Hamburg, turning back all the streams at and near Buffalo into this canal is very comprehensive.

I have given instructions to the engineers that they shall construct the sanitary canal and make it comprehensive (as Jim Hill said), so comprehensive that engineers 50 years hence will not be able to greatly improve it.

Mr. LEGARE. Mr. Bowen, it seems to me you are wrong in your proposition to use more than is allowed in the treaty. For instance, at the foot of clause 5 you are unquestionably given the right to use this water for use of canals and domestic uses, or for the purposes of navigation. Now, under that you could use your 1,600 in addition to the 56,000.

Mr. BOWEN. What we ask for is 4,400 cubic feet per second for power and 1,600 cubic feet per second additional, under the last clause of Article V of the treaty for sanitation and navigation.

Mr. LEGARE. That is why I don't think your scheme is practical. Under that clause you have the right to use that in addition to 56,000, but you go further and say you want to use it for water-power purposes. You say that your scheme also includes power purposes. Now, article 8, that you mentioned here, seems to me to confine itself clearly to the 56,000 feet mentioned in the treaty. It says "these waters" only. It says "these waters," meaning these waters that are mentioned back here.

Mr. BOWEN. If you take that viewpoint, then we are entitled to the diversion we ask for, on the grounds that we use it for conservation of both health and power. The Government is pledged to stop pollution of international waters.

Mr. LEGARE. But you are asking for 6,000.

Mr. BOWEN. We are asking for the whole diversion for both conservation of health and power.

Mr. GARNER. The only difference between Mr. Legare and Mr. Bowen seems to be the difference between 6,000 feet and the 4,400 feet.

Mr. BOWEN. Yes, sir. The Hydraulic Co., with 6,500 cubic feet, and the Niagara Falls Power Co., with 8,600 cubic feet at the falls, are generating less power than we will generate with 6,000 feet.

Mr. GARNER. But could you utilize this—unless you had enough to make a business of it—

Mr. BOWEN. We need the full 6,000 cubic feet to make a commercial success. Yes, sir.

The CHAIRMAN. Mr. Bowen, how long do you think it will take you to conclude?

Mr. BOWEN. I have some information in regard to electrical contracts that you have sought for and also some suggestions as to what action has been taken before in similar applications.

The CHAIRMAN. We will go on until 5 o'clock.

Mr. BOWEN. In addition to the change in the title of the bill (Mr. Bowen refers to the Simmons bill), I have a correction where it says "above the Falls of Niagara within the State of New York for power purposes." Now, my suggestion is to change that to read: "For all purposes mentioned in the treaty." Furthermore, in line 8 of the Simmons bill, after the words "such diversions," I would suggest inserting these words: "And who shall conserve the usefulness of the water to its fullest extent." Now, furthermore, to cover



the point of the additional 1,600 feet, after the word "nine" in line 12, insert "to wit: Twenty thousand cubic feet per second for power and one thousand six hundred cubic feet per second for sanitation and navigation," covering the point that I have explained. Then, on page 2 of the Simmons bill, lines 3 and 4, strike out "commissioners on the part of the United States in the," leaving it to read: "That no such permit shall be granted allowing diversions of water exceeding in the aggregate fifteen thousand six hundred cubic feet per second without the consent of the State of New York and of the international joint commission provided for by said treaty;" and adding at that point, in line 5: "And all further diversions shall be governed by the rules of precedence and preference made in the treaty, and shall be limited to such amounts as shall not injure or interfere with the navigable capacity of Niagara River, or its integrity and proper volume as a boundary stream, or the scenic grandeur of Niagara Falls," leaving it in the discretion of the Secretary of War to decide whether any application shall come within the terms of the treaty. I think, with those corrections, there is no objection to the Simmons bill, and almost the same corrections could be inserted in the Smith bill.

The CHAIRMAN. Have you made the corrections in both bills?

Mr. BOWEN. Yes, sir. I started to refer to a part of the case as presented in a case before the Rivers and Harbors Committee on the Alexander bill on January 6, 1911. There we showed our case very completely in its essential points. To further illustrate the points, I have here a signed statement issued by Mr. Isham Randolph, of Chicago, stating the reasons why the grants should be made to the Erie & Ontario Sanitary Canal Co.:

*Reasons why Congress and the International Joint Commission should grant to the Erie & Ontario Sanitary Canal Co. the right to divert from Lake Erie and use 6,000 cubic feet of water per second.*

In presenting an argument to Congress and the International Joint Commission on behalf of the Erie & Ontario Sanitary Canal, the following points should be brought out:

First. Buffalo is discharging its sewage in a raw state into the Niagara River and the waters of said river are thereby polluted and rendered unfit for potable use.

This river is the natural source of supply for cities and villages on both sides of its channel, and the inhabitants of said cities and villages have learned by sickness and death, which medical science has truly traced to the water supply, that the water of Niagara River was unwholesome and laden with pathogenic germs.

To secure relief from this deplorable condition, resort has been made to artificial means of purifying the water taken from the river for potable use, with results not always satisfactory, but always expensive. This condition will continue to affect the inhabitants of the Niagara frontier just as long as the unpurified sewage of Buffalo flows into the river. An adequate purification system for the city of Buffalo means an initial expenditure of many millions of dollars and an annual outlay for operation and upkeep which would represent the interest on many millions more. The alternative to sewage purification would be to abandon the Niagara River as an open sewer and the discharge of the sewage into some channel or channels which would carry it off. This proposition is practicable, but its cost would be very great, probably as great as the creation, operation, and upkeep of an adequate purification plant.

Here arises the opportunity for private enterprise to do for the city what it hesitates to do for itself. Seeing this opportunity the projectors of the Erie & Ontario Sanitary Canal have formulated a project and offered it as a means of diverting the sewage of Buffalo from the Niagara River.

Briefly stated, this project contemplates reversing the flow of the Buffalo River and Smokes Creek through a tunnel several miles in length. The flow into which from the south is through an open channel, and away from which on the north is through an open channel, which finally discharges into the gorge of Eighteen Mile Creek. As an auxiliary to the construction described, it is proposed to use that part of the Erie Canal along the water front of Buffalo and extending north to the adopted project for the barge canal.

This costly project is not offered as a free gift; there are but few philanthropists in the world who can make such a kingly donation to humanity; the projectors believe that they can be compensated for their outlay by a gift which will cost their beneficiaries nothing. That gift is a right in perpetuity to abstract from Lake Erie to feed the channels which they will provide 6,000 cubic feet of water per second. This water in passing from Lake Erie to Lake Ontario will drop 326.42 feet; taking the mean level of Erie from 1860 to 1906 as 572.60 above sea level, and the mean level of Ontario for the same period as 246.18 (see General Chart of Northern and Northwestern Lakes, issued by the War Department, Jan. 6, 1908, Catalogue A). If we assume 14.42 feet as the loss of head due to slope and other causes, there remains a power-producing drop of 312 feet; at an efficiency of 80 per cent, 1 cubic foot dropping 11 feet will produce 1 horsepower; therefore, if we divide 312 by 11 and multiply by 6,000 cubic feet per second, the result will be 170,160 net electrical horsepower.

Now in the conservation of a natural resource that use is best which yields the greatest amount of service and consequent benefit to the human race. This condition will be reached in the highest possible degree of attainment in carrying out the project put forward by the originators and developers of the plans for the Erie & Ontario Sanitary Canal.

This statement is borne out first by the fact that by means of this project the sewage of Buffalo will be kept out of the Niagara River, leaving that stream an unpolluted and healthful source of supply for the towns and villages along its banks, both on the American and on the Canadian sides—a result which will be recognized as of primary and vital importance; secondly, in no other way can the volume of water which it is proposed to extract from Lake Erie be made as useful commercially or caused to produce so high a revenue. The amount of that revenue, it must be remembered, is not to be measured by the net electrical power indicated at the switchboard, for it is well known that electrical companies are enabled to sell from 25 to 50 per cent more power than they are theoretically producing, by reason of the fact that all patrons are not synchronous users of power.

Under Article V of the treaty between the United States and Great Britain relating to boundary waters between the United States and Canada, proclaimed May 13, 1910, the United States "may" authorize and permit the diversion within the State of New York of the waters of said river above the Falls of Niagara, for power purposes, not exceeding in the aggregate a daily diversion at the rate of 20,000 cubic feet of water per second. \* \* \* "The prohibitions of this article shall not apply to the diversion of water for sanitary or domestic purposes, or for the service of canals for purposes of navigation."

Under the operations of the Burton bill, the taking of water from the Niagara River on the American side has been limited to 16,600 cubic feet per second, so that there is a margin of 4,400 cubic feet per second which may become available for water-power purposes. For this surplus water there are rival applicants; two of these are companies now in successful operation; one of these companies is the Niagara Falls Power Co., operating under a head of 136 feet, or only 41.66 per cent of the total difference in level between Lakes Erie and Ontario; the other is the Niagara Falls Hydraulic Power & Manufacturing Co., operating under a head of 210 feet, or 64.33 per cent of the total difference in level between Lakes Erie and Ontario.

The Erie & Ontario Sanitary Canal Co. proposes to operate under a head of 312 feet, or 95.58 per cent of the total difference in level between Lakes Erie and Ontario.

As a further comparison of the useful work at each of the power sites named, it may be stated that one cubic foot of water used by the respective companies on an efficiency basis of 80 per cent gives:

	Horsepower.
For the Niagara Falls Power Co.....	15.4
For the Niagara Falls Hydraulic Power & Manufacturing Co.....	23.86
For the Erie & Ontario Sanitary Canal Co.....	35.45

The Erie & Ontario Sanitary Canal development shows an efficiency 31½ per cent higher than the most efficient of the other two companies in this material phase of power produced, and as a conservator of life and health it stands 100 per cent above any competitor.

*Objections to abstracting water from Lake Erie and from Niagara River.*

The valid objection to abstracting water from Lake Erie lies in its diminishing slightly the depth of navigable water and thus harmfully affecting lake commerce. This objection can be met in one or other of several ways. A dam such as was recommended by the Board of Engineers on Deep Waterways between the Great Lakes and the Atlantic Seaboard (see p. 293, H. Doc. No. 149, 56th Cong., 2d sess.) would meet all objections raised by navigators on the score of reduced depth. This method is opposed by the American section of the International Waterways Commission, because of the increased danger of flood damage to Buffalo, "and for the postponement of the date of opening navigation in the spring" (see pp. 7 and 8, Sixth Progress Report of the International Waterways Commission, Nov. 1, 1910).

The construction of the Erie & Ontario Sanitary Canal would care for the flood conditions which inspired the apprehension of the commission, by affording outlet for the high waters; the commission however believes that regulating works can be constructed which will accomplish the purposes for which the dam (which they condemn) was designed. (See p. 8 of the report of Nov. 1, 1910, published as H. Doc. No. 779, 61st Cong.)

An alternative treatment which will secure the regulation of depth in Lake Erie is that suggested by Mr. J. Edward Thebaud and illustrated on page 619 of House Document No. 26688, Sixty-first Congress, second session.

As an engineering problem there is and can be no doubt of a successful solution which will bring about the regulation of Lake Erie for an expenditure which will be within reasonable limits.

We now pass on to the Niagara River. The abstraction of water from the Niagara River diminishes the volume of flow over the American and Canadian Falls and tends to lessen the grandeur and beauty of that wonderful work of the Great Creator. The consensus of opinion of the members evidenced by the report of the International Waterways Commission is that the flow over the Falls may be reduced approximately 66,000 cubic feet per second without materially detracting from the beauty and sublimity of the spectacle.

In our judgment it is within the scope of engineering accomplishment to construct such diffusion works above the Horseshoe Falls as will increase the beauty of the Falls and admit of a still greater diversion of the water for commercial uses. The contour of the Falls changes steadily. The escarpment is being worn away year by year to an extent which attracts the attention of any close observer who has the privilege of seeing the Falls constantly or even at long intervals.

The Horseshoe Falls has lost the form which gave it that familiar designation, and it is gradually assuming a V shape. At the apex of this V the water is of great depth and its destructive force is gigantic. The approach to the apex of the V is through a deep channel, and the way to arrest the rapid erosion which is going on is to choke this deep channel or thalweg, until the waters are forced to flow in greater depth over the entire rim of the Falls.

The writer has developed a project for doing what he here suggests. He explained it to President Taft in 1909 and received his approval as a layman, not as an engineer. In February of the present year Mr. Taft gave the writer a letter of introduction to Mr. Fielding, minister of finance, Dominion of Canada, bringing the writer's proposition to his attention. This letter was presented to Mr. Fielding in Ottawa on February 13 last. Mr. Fielding introduced the writer to Dr. Pugsley, minister of public works of the Dominion, and to him and to his engineering advisers, Mr. Louis Coste and Mr. A. St. Laurent, he explained the methods of creating diffusion works which would tend to arrest the rapid recession of the three Horseshoe Falls, and diffuse the volume of water evenly over the crest of the Falls and add greatly to the beauty of the cataract and permit a more liberal use of the water for commercial purposes. The creation of this diffusion work must be accomplished under a treaty between the United States and Canada, and it should be created as an international work.

ISHAM RANDOLPH.

CHICAGO, August 2, 1911.

A MEMBER. Is he in favor of this proposition?

Mr. BOWEN. Yes; he is our chief engineer. I would say right here that the bonded indebtedness of the city of Buffalo is so great that they are unable to do this as a public improvement.

The CHAIRMAN. Does that finish your statement?

Mr. BOWEN. The city of Buffalo asked the Secretary of War to do this thing two years ago, and in their resolutions asking the Secretary of War to investigate, if he decided we should have the grant, they asked that certain promises that we make should be incorporated in the grant as a condition precedent. The terms of our proposal were: This thousand feet of dockage, and the right not only to the city, but to all other municipalities and individuals on the Niagara frontier to drain into this canal as long as the grant will last; in addition to that, we will voluntarily put in this provision that although now the rate charged in Buffalo is not to exceed 9 cents per kilowatt-hour, it shall not exceed  $4\frac{1}{2}$  cents per kilowatt-hour; and furthermore, that the city in consideration, shall give its aid in the promotion of this enterprise, and use of such sewage, and the right and permission to use the streets for conduits under terms not more onerous than those given to the other companies in Buffalo. And this contract goes into the record.

The CHAIRMAN. Very well; have you finished?

Mr. BOWEN. I have some few remarks.

#### CONTRACT FORM WITH MUNICIPALITIES.

This agreement, made this — day of ———, 191—, between the Erie & Ontario Sanitary Canal Co., a corporation of the State of New York, party of the first part, and the city of Buffalo, a municipal corporation of the State of New York, by ———, its mayor, with the concurrence of the common council of said city, party of the second part, witnesseth:

Whereas said party of the first part has obtained or expects to obtain the consent of the Secretary of War to take water from Lake Erie for the use of the proposed canal, extending from Lake Erie to Lake Ontario; and is to construct and operate said canal for the purpose, among others, of furnishing power to industries operating along the line of said canal, and to such municipalities adjacent thereto as may desire to take advantage of the opportunities afforded by said canal; of receiving and disposing of in a sanitary manner the sewage of such municipalities and industries; of abating the periodical floods caused by the overflow of Buffalo River and Cazenovia Creek; and of affording means for reversing the flow of streams and sewers now emptying into Lake Erie and Niagara River, thereby purifying the water supply of the Niagara Frontier; and of serving as a branch of the barge canal now in process of construction by the State of New York, and affording dockage facilities for private and, if need be, for municipal uses.

Whereas said party of the first part desires the cooperation of said party of the second part in the promotion of said enterprises, and said city of Buffalo has manifested its willingness to cooperate by joining said party of the first part in its application for the consent of the Secretary of War, by the following resolution duly adopted by the common council of said city and approved by the mayor, viz:

"That the city of Buffalo, by its common council and mayor, hereby commends to the favorable consideration of the Secretary of War the memorial of the Erie & Ontario Sanitary Canal Co., and believing that the enterprise, if feasible at all, and if established and conducted with due regard to the public welfare, will inure to the immeasurable benefit of sanitary and industrial interests of national scope and influence, urges the Secretary of War to grant the prayer of the petition of said Erie & Ontario Sanitary Canal Co., provided that upon investigation he is convinced that the company's plans are practicable from a legal and engineering point of view, and provided further that such grant be made expressly subject to the following conditions precedent.

(1) That prior to the commencement of the work of excavating and constructing said canal, or of proceedings for the appropriation of lands therefor, said company shall enter into written contracts with the city of Buffalo, and such other municipal corporations along the line of the proposed canal as may desire such arrangements, securing to the said city of Buffalo and other municipal corporations, in the interest of the public health, the perpetual right to the free and unlimited use of said canal for the delivery of sewage and drainage thereto at the most sanitary and convenient points, without charge to any of said municipal corporations for such use and privilege; securing like privileges to individuals and private corporations occupying the territory adjacent to the canal, and affording such assurances as may be required that such sewage and drainage shall be disposed of in a sanitary manner;

(2) That prior to the commencement of work or of proceedings for the acquisition of lands for said canal, said Erie & Ontario Sanitary Canal Co. shall also stipulate by contract with the said municipal corporations, or such of them as desire it, to furnish to all persons and corporations power and light for municipal, industrial, business, or domestic purposes on terms which shall be just and equal to all consumers, admitting of no discriminations among consumers similarly situated, excepting in favor of municipal corporations as contrasted with private industrial or business corporations or individuals;

(3) Such other conditions calculated to promote the public interests as said Secretary of War may in his judgment deem advisable to prescribe."

Now, therefore, in consideration of the exchange of mutual benefits as aforesaid, and of the sum of one dollar paid by each of the parties hereto to the other, receipt whereof is hereby confessed and acknowledged, the parties hereto agree as follows:

Said party of the first part hereby grants to the party of the second part the perpetual right to construct sewers and drains from such points in the city of Buffalo as may be determined upon by said city, to and into the said canal of the party of the first part, and to empty therefrom into said canal its sewerage and drainage that is not prohibited by law; and that no charge whatever of any kind or nature shall be made by said party of the first part to said city of Buffalo of the second part for such use and privilege, other than the cooperation of said city mentioned in the foregoing resolutions; the party of the first part shall receive and dispose of said approved sewage and drainage in a thoroughly sanitary manner, subject to the approval of the State and local departments of health.

Upon receipt of written applications in form acceptable to said departments of health, which shall bind the applicants not to deliver or cause or permit to be delivered improper or objectionable sewage or drainage, and not otherwise, the party of the first part shall also grant freely and without charge, like privileges of sewage and drainage to individuals and private corporations occupying lands adjacent to said canal.

In measure proportionate to its other similar obligations to other municipalities and other patrons, said party of the first part shall also furnish to said city of Buffalo sufficient current for power and light for municipal purposes, upon the demand of said municipality, and at such prices (not to exceed 4½ cents per K.W.H.) and on such terms as shall be hereafter mutually agreed upon, in no case to be higher or more burdensome to said city of Buffalo than to other municipal corporations, or to any individuals or industrial corporations similarly situated along the line of said canal. Said party of the first part further agrees to furnish to individuals and business and industrial corporations within the city of Buffalo, on terms which shall be just and equal to all consumers similarly situated, sufficient current for power and light for industrial, business, or domestic purposes, at prices not to exceed 4½ cents per K.W.H.

Said party of the first part also agrees to provide for the use of said city of Buffalo, at some convenient point, a frontage along its canal of not less than 1,000 continuous feet for dockage purposes, provided, however, that said city of Buffalo shall exercise its option in this regard at some time within five years from the time of the opening and operation of said canal for navigation, and immediately after the exercise of such option shall commence construction of docks for the benefit of said municipal corporation and its inhabitants; the privilege hereby granted to be upon such reasonable terms as shall be agreed upon by the parties hereto.

Said party of the first part further agrees to save said city of Buffalo harmless from all costs, charges, damages, and rights of action accruing or arising

from the construction or operation of said canal, or from insanitary conditions, if any, that may result from the exercise by the party of the second part of any of the privileges hereinbefore granted.

Said party of the second part, in consideration of the foregoing, agrees to cooperate with the party of the first part in securing such privileges from the Government of the United States and from the State of New York as may be necessary to the successful construction and operation of said canal, provided, however, that such cooperation shall not entail upon said party of the second part any pecuniary loss or cost; and said city of Buffalo grants to the party of the first part such sewage and drainage and the right, permit, and license to use and occupy and cross over or under any and all streets, alleys, and waters of said city during the life of this contract, for any and all electric distributing lines, conduits, and cables that it may find necessary for distributing current throughout the present or future limits of said city upon as advantageous terms and with not more expensive construction than are or may hereafter be enjoyed by or permitted or granted to any other company under similar conditions.

This agreement shall be binding upon and shall inure to the advantage of the successors and assigns of the parties hereto.

In witness whereof, the parties hereto have caused these presents to be duly signed and sealed the day and year first above written.

The CHAIRMAN. If you have anything else relevant to the subject-matter to put in the record you may give it to the reporter.

Mr. BOWEN. Yes, sir; for instance, the rates in Niagara Falls.

Mr. COOPER. What about the rates right now? I thought you could give a summary.

Mr. BOWEN. In Niagara Falls, Ontario, it is 4½ cents per kilowatt horsepower—in Buffalo it is not to exceed 9 cents. The power rates in Niagara Falls, Ontario, are, for power delivered at commercial voltage, \$23 per horsepower, less \$3 if paid before the end of the month. In Buffalo the average for all purposes is within a few cents of \$35 per horsepower per year. There is no competition, because the companies there are both subsidiary companies of the Niagara Falls Power Co. A list of all these companies and their directors and their securities is in a pamphlet which, if it is of any interest to the committee, is at your service.

The CHAIRMAN. Leave that with the committee. Just give the name of it to the reporter to identify it.

Mr. BOWEN. "Statistics of local and miscellaneous securities, by J. C. Dunn & Co.," published in December, 1909.

I would like to state that a similar grant to that we ask you for was made in 1905 to the Mississippi River Power Co., at Keokuk, Iowa. I have a copy of the grant made to them, and it was on condition only that they should give the free use of enough electric power to operate the lock, and they should build the dam, lock, and dry dock at their own expense. They will be generating 200,000 horsepower next year, and they are an example of good faith.

The CHAIRMAN. You may get up all these things and give them to the reporter. We will now adjourn until to-morrow morning.

Whereupon at 5 o'clock p. m. the committee adjourned until Friday morning at 10 o'clock, this hearing being adjourned until 2 o'clock.

The following are the changes in the Smith bill suggested by Mr. Bowen:

In the preamble strike out "fifth article of the"; strike out "Canada" and insert "Great Britain"; after "nine" add "and for other purposes."

Page 1, line 3, after "diverted from" add "Lake Erie in Erie County, New York, or from."

Page 1, line 5, strike out "power purposes" and add "all purposes mentioned in said treaty."

Page 1, line 10, after "nine," insert "to wit: 20,000 cubic feet per second for power, and 1,600 cubic feet per second for sanitation and navigation."

Page 1, line 10, after above insertion, add "such individuals, companies, or corporations only as shall conserve the usefulness of the water to its fullest extent shall be given permits."

Page 2, line 10, strike out "made to" and add "given with the consent of."

Page 2, lines 11, 12, and 13, strike out "with full power and authority to said State to make such grant or grants of the use thereof as it may determine to be for the public interest," and add "and shall be governed by the rules of precedence and preference made in said treaty; and shall be limited to such amounts as shall not injure or interfere with the navigable capacity of Niagara River or its proper volume as a boundary stream, or the scenic grandeur of Niagara Falls."

PETITION TO CONGRESS AND TO THE INTERNATIONAL JOINT COMMISSION IN BEHALF OF  
ERIE & ONTARIO SANITARY CANAL CO.

Whereas it is stipulated in Article V of the treaty between the United States and Great Britain, signed January 11, 1909, commonly known as the waterways treaty, that the United States may authorize and permit the diversion within the State of New York of the waters of Niagara River above the Falls for power purposes, not exceeding in the aggregate a daily diversion at the rate of 20,000 cubic feet per second, provided the level of Lake Erie and the flow of Niagara River shall not be appreciably lowered;

Whereas the prohibition of Article V does not apply to the diversion of water for sanitary and domestic purposes, and for the service of canals for the purpose of navigation, and it is stipulated in Article IV that the boundary waters shall not be polluted on either side to the injury of health or property on the other;

Whereas the cities bordering on the Niagara River and situate in the district contiguous thereto are subjected to epidemics of typhoid fever, caused by the polluted water taken from Niagara River, and considerations of public health demand the abatement of these dangers without delay;

Whereas the Erie & Ontario Sanitary Canal Co. has been organized under the laws of the State of New York to construct without State or Federal aid a canal between Lakes Erie and Ontario, beginning at a point at or near Smokes Creek in the city of Lackawanna, thence to a point at or near the mouth of Eighteen Mile Creek on Lake Ontario and laterals thereto;

Whereas the barge-canal law of New York State (sec. 3, ch. 147, Laws 1903) makes no provision for the use of the Erie Canal from the Guard Lock at Black Rock, Buffalo, to Tonawanda, and said Erie & Ontario Sanitary Canal Co. offers to deepen, widen, and maintain said portion of the Erie Canal from Black Rock to Tonawanda as a branch of the barge canal without cost to the State of New York, and under plans to be approved by the canal board and to be used in connection with the main channel of the Erie & Ontario Sanitary Canal to stop the pollution of Niagara River and the barge canal;

Whereas said canal may be used free of cost by the cities of Lackawanna, Buffalo, Tonawanda, North Tonawanda, Niagara Falls, Lockport, and all other municipalities and communities situate upon the Niagara frontier, to carry off all the sewage and storm waters now flowing from said cities into Lake Erie and the Niagara River;

Whereas said canal will be of sufficient depth and width to enable boats, barges, and other water craft of large tonnage to navigate the same from its beginning on Lake Erie to a point intersecting the Erie Canal at or near Pendleton, thereby increasing the efficiency and value to the public of said Erie Canal, and providing additional terminals for the barge canal;

Whereas the level of Lake Erie will not be lowered by the building of said canal so as to interfere with or affect its navigability, and the waters flowing within the Niagara River shall not be diverted so as to effect the beauty and grandeur of the volume thereof flowing over Niagara Falls;

Whereas the International Joint Commission must hear and pass upon the application of said company for the use of the necessary water for the canal: Now, therefore,

We respectfully ask that a grant of water from Lake Erie be made to the Erie & Ontario Sanitary Canal Co., conditioned as follows:

1. That said company be authorized to take 6,000 cubic feet of water per second from Lake Erie for sanitation, navigation, and power—4,400 cubic feet thereof being the remaining part unused of the 20,000 cubic feet allowed for power on the American side under the treaty, and 1,600 cubic feet thereof being an allowance under said treaty especially for sanitation and navigation; which volume of water shall be taken through three channels designated as Buffalo River, Smokes Creek, and Black Rock Harbor.

2. That said company within two years after the date of the grant shall begin construction of said canal, without seeking from State or Nation other aid than that afforded by such cooperation as may properly be effected between Federal and State authorities, and shall with due diligence prosecute the work to completion.

3. That in consideration of said grant said company shall give to the cities of Lackawanna, Buffalo, Tonawanda, North Tonawanda, Niagara Falls, Lockport, and all other municipalities, public and private corporations and individuals situate or living in what is known as the Niagara frontier, the free use and right to use said canal during the full term of the grant, for sewage disposal purposes and for carrying off flood waters caused by storms.

4. That in consideration of the facilities which it will afford to the communities, municipalities, corporations, and individuals enumerated, said company shall have and enjoy for 99 years the right to and possession of all the water power which it is possible to develop from the volume of water which it will be permitted to withdraw from Lake Erie and cause to flow through its channel into Lake Ontario.

5. That said company shall have the right, when Buffalo River shall have been sufficiently deepened and enlarged to a junction with said canal, to make a proper connection of said river with said canal, and cause the waters of Lake Erie to flow through said Buffalo River into said canal.

6. That said company may make such changes and improvements in Smokes Creek, Ellicott Creek, and other streams in Erie and Niagara counties, as will permit water to enter said streams from Lake Erie and Niagara River, and flow through them into Lake Ontario; and may build and maintain at the mouths of Smokes Creek and Eighteen Mile Creek such protecting piers and docks as may be necessary, all of which construction affecting navigation shall be done under the direction of the War Department.

7. That said company shall forfeit its grant should it be judicially determined that it has entered any conspiracy or unlawful combination or monopoly in restraint of trade; and said permit shall not be transferable without the approval of the Secretary of War, and no such approval shall be given without the consent of the State of New York; and no electric current produced under said grant shall be transmitted to any point without the State of New York without the consent of the State.

8. That said company shall prove to the satisfaction of the Secretary of War that it will produce more electrical horsepower from every cubic foot of water per second to be used by it under such grant than can be produced by any other company.

The foregoing preamble and request was read, considered, and adopted at a regular meeting of the Central Council of Business Men, Taxpayers, and Residents' Association of Buffalo, representing upward of 3,000 members, this 11th of September, 1911.

WILLIS H. TENNANT, *Secretary.*

Adopted also by city of Lackawanna, city of Lockport, county supervisors of Erie County, N. Y.; village of Williamsville, village of Kenmore, village of Lasalle, village of Youngstown, city of Buffalo.

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ERIE & ONTARIO SANITARY CANAL CO. WANTS A SIMILAR GRANT TO THIS.

[PUBLIC—No. 65.]

AN ACT Granting to the Keokuk and Hamilton Water Power Company rights to construct and maintain for the improvement of navigation and development of water power a dam across the Mississippi River.

*Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,* That the assent of Congress is hereby given to the Keokuk and Hamilton Water Power Company, a corpora-



tion created and organized under the laws of the State of Illinois, its successors, and assigns, to erect, construct, operate, and maintain a dam, with its crest at an elevation of from thirty to thirty-five feet above standard low water, across the Mississippi River at or near the foot of the Des Moines Rapids, from Keokuk, Iowa, to Hamilton, Illinois, and to construct, operate, and maintain power stations on or in connection with the said dam, with suitable accessories for the development of water power, and the generation, use, and transmission therefrom of electric energy and power to be derived from the Des Moines Rapids on the Mississippi River: *Provided*, That in lieu of the three locks and the dry dock, with their appurtenances, now owned and operated by the United States, at the Des Moines Rapids Canal, the said Keokuk and Hamilton Water Power Company shall build, coincidentally with the construction of the said dam and appurtenances, at locations approved by the Secretary of War, a lock and dry dock with their appurtenances; the said lock shall be of such a kind and size and shall have such appurtenances and equipment as shall conveniently and safely accommodate the present and prospective commerce of the Mississippi River; the said dry dock and its appurtenances shall be such as to give space, facilities, and conveniences for the repair of vessels at least equal to those afforded by the existing Government dry dock and shops at the Des Moines Rapids Canal: *And provided further*, That the said dam and appurtenant works shall be so designed, located, constructed, maintained, and operated, and the said lock and dry dock, with their appurtenances, shall be so designed, located, constructed, and equipped, as to permit at all times during the season of navigation, and at any stage of water, the safe and convenient navigation of steamboats and other vessels, or of rafts and barges, through the portion of the Mississippi River now occupied by the Des Moines Rapids, as well as through the entire length of the pool formed by the said dam: *And provided further*, That detailed plans for the construction and operation of the said dam, lock, dry dock, and appurtenant works, shall be submitted to and approved by the Secretary of War before the commencement of any portion of the said works; and the said works shall be constructed under the supervision of some engineer officer of the Army designated for that purpose, and that after the approval of the said plans no deviation therefrom shall be made without the prior approval of the Secretary of War of any such deviation: *And provided further*, That compensation shall be made by the said Keokuk and Hamilton Water Power Company to all persons, firms, or corporations whose lands or other property may be taken, overflowed, or otherwise damaged by the construction, maintenance, and operation of the said works in accordance with the laws of the State where such lands or other property may be situated; but the United States shall not be held to have incurred any liability for such damages by the passage of this act: *And provided further*, That when the said dam, lock, dry dock, and appurtenant works shall have been completed to the satisfaction of the Secretary of War, the United States shall have the ownership and control of the said lock, dry dock, and their appurtenances, and operate and maintain the same.

Sec. 2. That the withdrawal of water from the Mississippi River and the discharge of water into the said river, for the purpose of operating the said power stations and appurtenant works, shall be under the direction and control of the Secretary of War, and shall at no time be such as to impede or interfere with the safe and convenient navigation of the said river by means of steamboats or other vessels, or by rafts or barges: *Provided*, That the said company shall construct such suitable fishways as may be required from time to time by the Secretary of Commerce and Labor.

Sec. 3. That, except as provided for below in this section, the Keokuk and Hamilton Water Power Company shall bear the entire cost of locating, constructing, maintaining, and operating the structures and appurtenances provided for in this act: *Provided*, That the United States shall bear the cost of the supervision of the work by an engineer officer of the Army as provided for in section one of this act, and also the cost of maintaining and operating the lock and dry dock with their appurtenances, after their completion and due acceptance by the Secretary of War on behalf of the United States: *And provided further*, That the Keokuk and Hamilton Water Power Company shall provide, in connection with such lock, dry dock, and appurtenances, a suitable power plant for operating and lighting the same, according to plans and specifications submitted to and approved by the Secretary of War.

SEC. 4. That the act entitled "An act granting to the Keokuk and Hamilton Water Power Company right to construct and maintain wing dam, canal, and power station in the Mississippi River in Hancock County, Illinois," approved February eighth, nineteen hundred and one, is hereby repealed.

SEC. 5. That this act shall be null and void if actual construction of the works herein authorized be not commenced within five years and completed within ten years from the date hereof.

SEC. 6. That the right to alter, amend or repeal this act is hereby expressly reserved.

Approved, February 9, 1905.

#### PROPOSED BILL FOR CONGRESS.

A BILL To give effect to the treaty between the United States and Great Britain signed January 11, 1909.

Whereas it is stipulated in Article V of a treaty between the United States and Great Britain signed January 11, 1909, commonly known as the waterways treaty, that the United States may authorize and permit the diversion within the State of New York of the waters of the Niagara River above the Falls for power purposes, not exceeding in the aggregate a daily diversion at the rate of twenty thousand cubic feet per second, provided the level of Lake Erie and the flow of the Niagara River shall not be appreciably lowered; and

Whereas the prohibitions of Article V do not apply to the diversion of water for sanitary and domestic purposes and for the service of canals for the purpose of navigation; and

Whereas it is stipulated in Article IV of said treaty that the boundary waters shall not be polluted on either side to the injury of health or property on the other; and

Whereas the cities bordering upon the Niagara River and situate in the district contiguous thereto are subjected to epidemics of typhoid fever caused by the polluted water taken from Niagara River, and considerations of public health demand the abatement of these dangers without delay; and

Whereas the Erie & Ontario Sanitary Canal Co. has been organized under the laws of the State of New York to construct, without State or Federal aid, a canal between Lake Erie and Lake Ontario, beginning at a point at or near Smokes Creek, south of the city of Buffalo, on Lake Erie, and thence to the mouth of Eighteen Mile Creek on Lake Ontario, a distance of fifty miles, more or less; and

Whereas it is hereinafter provided that said canal shall be used free of cost by the cities of Lackawanna, Buffalo, Tonawanda, North Tonawanda, Niagara Falls, Lockport, and all other municipalities and communities situate upon the Niagara frontier, to carry off all the sewage and the sewage-polluted storm waters now flowing from said towns, cities, and municipalities into Lake Erie and the Niagara River, polluting the water thereof, to the great injury to the health of the persons living along the said Niagara frontier; and

Whereas the said canal will be of sufficient depth and width to enable boats, barges, and other water craft of large tonnage to navigate the same from its beginning on Lake Erie to a point intercepting the Erie Canal at or near the city of Lockport, in the State of New York, thereby increasing the efficiency and the value to the public of said Erie Canal; and

Whereas the level of Lake Erie will not be lowered by the building of said canal so as to interfere with or affect its navigability; and the waters flowing within the Niagara River, now under the control of the War Department, shall not be diverted so as to affect the beauty and grandeur of the volume thereof flowing over Niagara Falls: Therefore, to carry out conservation of health and power,

*Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,* That the Erie & Ontario Sanitary Canal Co., a corporation organized under the laws of the State of New York, be, and the same is hereby, authorized to take six thousand (6,000) cubic feet of water per second from Lake Erie and Niagara River for sanitary purposes and canal navigation and power four thousand four hundred cubic feet thereof being the remaining part of the twenty thousand cubic feet allowed for power on the American side under said treaty and one thousand six hundred cubic feet thereof being an allowance under said treaty especially for sanitation and navigation, which volume of water shall be taken through three channels designated as Buffalo River, Smokes Creek, and Black Rock Harbor.

Sec. 2. That the company within two years after the passage of this act shall begin the construction of the aforesaid canal without seeking from State or Nation other aid than that afforded by such cooperation as may properly be effected between Federal and State authorities; and the said company shall thereafter with due diligence prosecute the work to completion.

Sec. 3. That in consideration of the aforesaid grant said company shall give to the cities of Lackawanna, Buffalo, Tonawanda, North Tonawanda, Niagara Falls, Lockport, and all other municipalities, public and private corporations and individuals situate or living in what is known as the Niagara frontier, the free use and perpetual right to use the said canal for sewage-disposal purposes and for the carrying off of flood waters caused by storms.

Sec. 4. That in consideration of the facilities which it will afford to the communities, municipalities, corporations, and individuals enumerated in section three of this act the company shall have and forever enjoy the right to and possession of all the water power which it is possible to develop from the volume of water which this act permits it to withdraw from Lake Erie and cause to flow through its proposed channels into Lake Ontario.

Sec. 5. That the company shall have the right, when Buffalo River shall have been sufficiently deepened and enlarged to a junction with the proposed canal, to make a proper connection of said river with said canal, and thereafter cause the waters of Lake Erie to flow through said Buffalo River into the said canal.

And further, that the said company may make such changes and improvements in Smokes Creek, Ellicott Creek, and other streams in Erie and Niagara Counties as will permit water to enter the said streams from Lake Erie, and through them into the canal of the said company, and through the same into Lake Ontario.

And further, that the said company may build and maintain at the mouths of Smokes Creek and Eighteen Mile Creek such protecting piers and docks as may be necessary to carry out the purposes and operations of the company, all of which construction affecting navigation shall be done under the direction of the War Department.

Sec. 6. That the provisions of this law shall cease to be operative should it be judicially determined that said company has entered any conspiracy or unlawful combination or monopoly in restraint of trade.

Sec. 7. The Secretary of War shall extend the present permits for the diversion of the fifteen thousand six hundred cubic feet per second.

"THE ECONOMIC RIGHTNESS OF THIS IS MANIFEST."

Isham Randolph, M. A. S. C. E., Consulting Engineer.

"Canadian laws prohibit pollution. The new international treaty declares that waters shall not be polluted on either side to the injury of health or property on the other."

The canal company will spend \$30,000,000 of its own money in construction and buildings and will give the use of the canal perpetually to all the people of the Niagara frontier free, without taxation, for sewage disposal and flood abatement. Niagara River water can then be had pure without filtration and zymotic diseases will be decreased over 50 per cent, as has been proved in Chicago.

#### BRIEF OF MILLARD F. BOWEN, FOR ERIE & ONTARIO SANITARY CANAL CO.

All of international treaty should be covered in the bill and not Article V only.

Jurisdiction of disposal of water should be retained by Congress absolutely, for purposes of stopping pollution of international waters, as well as for navigation.

A precedent for such a special grant as is asked for by us is that given to the Keokuk & Hamilton Water Power Co., February 9, 1905.

A national board of health should be formed to take full jurisdiction of interstate and international streams and lakes.

Conservation of both public health and power should be insisted upon.

This particular company that, without appropriations, will stop pollution by turning streams and sewers back from lake and river, should be given a grant equal to the existing permits, or at least to the extent of 6,000 cubic feet.

The hearing on January 6, 1911, on H. R. 26688, before the Committee on Rivers and Harbors, present our case quite fully.

If the Niagara Falls Power Co.'s 8,600 cubic feet were producing power at an efficiency of 80 per cent, at the rate of 15.4 gross horsepower per cubic foot, their production would be 105,952 horsepower.

With 6,000 feet we will produce 170,160 horsepower.

Independent competition should be insisted upon.

As a conservator of life and health, this company stands 100 per cent above any competitor.

New York State is interested from the standpoint that barge canal terminal facilities will be greatly increased, without appropriations.

Buffalo is interested because floods will be abated and sewage disposed of, without appropriations.

Other municipalities on the Niagara frontier petition for these things.

The status quo as to the other two companies will be maintained, and they testify that they are prosperous.

Medical societies and health officers of the frontier are clamoring for relief.

Gen. Bixby testifies that the use of the balance of the 20,000 cubic feet on the American side will not unfavorably affect scenic beauty.

Industrial development to the fullest practicable extent is carried out by this plan.

#### STATEMENT OF OSCAR E. FLEMING.

**MR. FLEMING.** I am from Windsor, Ontario. I am a barrister at law, counsel for the Electrical Distributing Co. of Ontario. They contemplate getting from the Hydro-Electric Commission, of Ontario, electric power from Niagara Falls to furnish Detroit, and in that way we are interested. I might remark in the first place that a great deal of what I had to say has been covered by the previous speakers. But I think it might be interesting to outline to you the scheme of the Hydro-Electric Commission of Ontario. It is a Government scheme originating with the municipalities to get for the people of Ontario electric power at cost. That is, the government makes nothing on the scheme and the people get it at actual cost. Now, they have a contract with the Ontario company for 20,000 horsepower. At the present time they are using 20,000 horsepower, and they are serving as far north as Toronto. It is about 180 miles from Niagara Falls to London and about 100 miles to Toronto. That is what they thought at first, but as the art of the uses for generation and distribution have developed they have found that they can send the power profitably 250 or 300 miles.

Now, the present municipalities in the scheme number about 20, and the thing has worked out very successfully. At our municipal elections on the 3d of January, 34 municipalities voted to buy power from the Hydro-Electric Commission with which to supply their people. In our district, between London and Windsor, on the Detroit River, 17 have voted to come with us. The Hydro-Electric Commission has made its figures, and the present consumption in that district would amount to five or six thousand horsepower. The cost of distribution in that district would be considerable, probably two million or two and a half million, which, added to the cost of the power at Niagara Falls and London, would make the price too high to serve this territory. So some parties—the people of Windsor and the Detroiters—conceived the idea of taking from the commission part of the surplus to deliver in Detroit. It helps out the whole scheme to cheapen power. It enables the people in the district in which I live to get it at \$30. That plan has been submitted to these municipalities and they have no objection to Detroit getting this benefit. As I understand it, there is an investment for distribution of several million dollars, and the more power that goes along the line cheapens the power for the consumers.

The contract was signed between our company and the commissioners, and at that time our company put up a guaranteed fund of

\$250,000, and we have all the rights that we require, so far as Ontario and the Dominion of Canada are concerned. The only bar to our getting to Detroit is the Burton Act. We had in mind that the Burton Act was a temporary affair, to last until the treaty came into effect. Under that treaty we realized that we could do business—that is, if there was no limitation put upon the export of power by that commission. Now, the commissioners are ready to go on with their work, and we take from the Government at Windsor 25,000 horsepower for Detroit use.

Mr. COOPER. Do the Canadian municipalities get it at cost?

Mr. FLEMING. Yes, sir.

Mr. COOPER. Detroit would not get it at cost?

Mr. FLEMING. No; because they charge us 10 per cent of our cost, because we are not interested locally. The Federal Power Co., of Detroit, is an organization associated with the Electrical Distributing Co., and we take the power and distribute it. The people are the same in the two companies, and it has got to be organized that way so as to distribute it in the two countries. They take the power there and sell it to the people in Detroit.

The CHAIRMAN. How long is this contract for?

Mr. FLEMING. For the full term of the contract with the Ontario Power Co. It expires in 1939.

The CHAIRMAN. How long, in your opinion, do you think it would take to exhaust the power you are entitled to under the provisions of the treaty?

Mr. FLEMING. That is a difficult question. In taking this up what I want to say to the committee is this: It might get to a point where we could get the power from Detroit.

The CHAIRMAN. That is why I asked you that question. There is great industrial development in lower Canada?

Mr. FLEMING. Yes, sir.

The CHAIRMAN. And it is only a question of a very short time when the people of Canada will use all the water they are entitled to?

Mr. FLEMING. I don't think there is any doubt about that.

The CHAIRMAN. Would it be a year or two, or three years?

Mr. FLEMING. I wouldn't like to venture an opinion, but it is going to be pretty near that.

The CHAIRMAN. You are using now——

Mr. GARNER. The Canadian side is using 11,000 and the American side is using 15,600 cubic feet.

Mr. DIFENDERFER. A little over 13,000, Mr. Garner.

The CHAIRMAN. You are using less than the American side?

Mr. FLEMING. Yes, sir; at the present moment. Now, as I said, we have all our plans made, but subject to the right to get into Detroit. I was about to say that in the ordinance the company was to sell the power at 20 per cent loss.

Mr. ———. What you want is the limitation taken off?

Mr. FLEMING. Yes, sir.

Mr. COOPER. Why should Canada, if it can not use that which is there, be anxious to have the restriction taken off?

Mr. FLEMING. It helps out the scheme of giving the people in Detroit the cheap power; but we have other water power—the Niagara River and the Ottawa River—in the north country, so

that we can well afford to give to Detroit that amount of power, and every man, woman, and child gets cheaper power.

Mr. DIFENDERFER. There is no contract between the city of Detroit and the Hydro-Electric Commission, is there?

Mr. FLEMING. Yes, sir; it is signed.

Mr. DIFENDERFER. You put up a bonus of \$250,000 in cash?

Mr. FLEMING. Yes, sir; and that is subject only to the permit to get it across the river, and if it is not given we get our money back.

Mr. WATROUS. As I understand it, 110,000 horsepower is being used out of 160,000 authorized to be used?

Mr. FLEMING. Under the Burton Act.

Mr. WATROUS. Then why can't you use twenty-five of the fifty thousand that is unused?

Mr. FLEMING. All of that is taken up by the Burton Act.

Mr. WATROUS. But not used?

Mr. GARNER. They have a permit from the War Department.

Mr. WATROUS. It is apparent that there is a permit for some 4,400 feet which is not being used.

Mr. COOPER. What is it held up for?

Mr. WATROUS. That is what I want to know. Just merely because the permit has been given, it is a very simple matter—

Mr. COOPER. Have you applied to the Secretary of War?

Mr. FLEMING. Yes, sir; and the permits have taken up all the water used.

The CHAIRMAN. They use it at any time?

Mr. FLEMING. Yes, sir.

Mr. GARNER. The explanation has been made this afternoon that they were contemplating using all that power soon.

Mr. COOPER. How long have they had those permits?

Mr. FLEMING. Since the Burton Act was passed.

Mr. GARNER. How long before we thought they were using it?

Mr. FLEMING. I don't know anything about their internal arrangements.

Mr. LEVY. When were you first refused by the Secretary of War?

Mr. FLEMING. I think it was over a year ago.

Mr. LEVY. What reason was given for the denial?

Mr. FLEMING. That the limit under the act was being taken up. They had no authority to grant any more permits under the Burton Act.

Mr. LEVY. In these permits is there no limitation as to the time? Do they give a permit to a company to sit down and hold that as long as it pleases?

Mr. FLEMING. I am not in a position to say.

Gen. GREENE. I have a copy of the permit here. The Secretary of War held two hearings, one in the summer of 1906.

He granted permits so that we would not all go to jail, because the acts done on the 30th of June were illegal, and then he investigated and found out what their plans were, and then held another hearing; then he issued permits for the quantities I stated this morning—50,000 to the Ontario company, 52,500 to the Niagara Falls company, 46,500 to the electrical company, and the balance was reserved for the use of a railway in Canada. Now, those permits are in force to-day.

A MEMBER. In August, 1907?

Mr. COOPER. Can these corporations wait in their discretion to use that?

Gen. GREENE. There is no time limit in the permit, but the Burton law says that it can be revoked.

Mr. GARNER. What company has failed to use the full power?

Gen. GREENE. The Electrical Development Co. (Ltd.) of Ontario.

Mr. LEGARE. They have not used any at all?

Gen. GREENE. Well, I understand they have sold a part of what they are authorized to export to Mr. Barton's company.

Mr. GARNER. In other words, they have a permit for a certain amount of power and they sell it to somebody else at a profit?

Gen. GREENE. Yes, sir.

Mr. BARTON. Sold 10,000 to the distributing company and it was not used because the company needed its entire generating capacity to supply the Canadian customers.

Mr. GARNER. Now, that is the most interesting statement I have heard so far. If I understand it, the Secretary of War allows a permit to continue in existence that is, not being used because all the power it can generate is being used in Canada. At the same time he allows the permit to stand and refuses your company the right to bring power into Detroit for the benefit of the people of the United States?

Gen. GREENE. Here is the document, an order for permits. To the International Railway Co., 1,500; to the Ontario Power Co., 60,000; to the Canadian Niagara Co., 52,500; and to the Electrical Development Co., 46,000 horsepower. This is signed "William H. Taft, Secretary of War."

Mr. BARTON. That was the order for the permits?

Gen. GREENE. The permits were simultaneous.

Mr. GARNER. Is there anyone here representing the Electrical Development Co.?

Gen. GREENE. I answered that question this morning.

Mr. DIFENDERFER. Did you not state this morning that the MacKenzie-Mann interests were shipping no power into the United States?

Gen. GREENE. I said I did not know. Now, there was a public record, a contract with the Niagara Falls Co.—

Mr. BARTON. No; that was with the distributing company, and that has terminated now.

Mr. DIFENDERFER. So that they are entitled to ship 46,000 horsepower, and have not done so?

Gen. GREENE. I heard a rumor that they renewed it. But nobody has ever claimed that they ever shipped more than 10,000 horsepower.

Mr. GARNER. The fact remains still that we are entitled under the Burton Act to 46,000 horsepower, and that we are not now getting. This permit has been in existence since 1907; other parties seeking to use this power have applied to the Secretary of War, and he has refused them permits. Possibly the Secretary of War can give us some information.

Gen. GREENE. Incidentally, I may say that in the year 1909 I applied to the Secretary of War for additional power and was refused.

The CHAIRMAN. If the Province of Ontario grants the license for the water on the Canadian side, why should not the State of New York grant the permit on the American side?

Gen. GREENE. I see no reason why it should not.

The CHAIRMAN. It seems to me that it would be a matter of greater convenience than the present way, through the Secretary of War.

Gen. GREENE. Eminent lawyers have given me the statement that when the United States has exhausted its power it is then with the State of New York to say who gets the power, and fix the limitations.

Mr. BROWN. I agree with Gen. Greene on the law proposition.

Mr. SHARP. The concrete question before us is this: The Secretary of War has this authority conferred upon him by Congress and he has granted permits to parties, some of whom have availed themselves of it and some of them have not. Then the Secretary of War ought to grant that permit to someone who shall use it.

Mr. GARNER. And if you should turn that entirely over to the State of New York, Michigan might not be agreeable to that.

Mr. COOPER. This is the language of clause 7:

The Secretary of War reserves the right to modify the form of this permit, to change the method or plan of measurement herein prescribed, or to substitute other modes of judgement, etc.

Is that an absolutely unqualified right?

Gen. GREENE. Section 5 of the Burton law reads this way:

The provisions of this act shall remain in force for three years from and after date of its passage, at the expiration of which time all permits granted hereunder by the Secretary of War shall terminate, unless sooner revoked, and the Secretary of War is hereby authorized to revoke any or all permits granted by him by authority of this act, and nothing herein contained shall be held to confirm, establish, or confer any rights heretofore claimed or exercised in the diversion of water or transmission of power.

And I apologize for breaking in again.

Mr. FLEMING. The reason for the passing of the Burton Act has already been presented to this committee. It was a temporary measure. The duties it was to perform have been performed and it should expire. We on our side of the river had reason to believe that the treaty would be the supreme law of the land, and we can not appreciate why Congress should try to restrict us in the use of our 36,000 feet.

The CHAIRMAN. I am in favor of the people of New York buying power wherever they can buy it the cheapest.

Mr. FLEMING. How would you like us to say: "You can't have this. We will impose a duty on every horsepower that goes out of Ontario"? That would not be just. That is like the Burton Act.

Mr. BROWN. Mr. Fleming, is it not true, from an engineer's and a lawyer's standpoint, that the final permanent use of this power, authorized to be created upon the Canadian side, is to be enjoyed by that country who first preempted it, and if America does not get the use of it Canada will, and the final use will be where it was preempted?

Mr. FLEMING. Yes, sir.

Mr. BROWN. Then the question in this case on the Canadian side depends upon whether the embargo is raised?

The CHAIRMAN. Mr. Brown has asked you a question and he desires an answer.

Mr. SMITH of New York. I wanted to ask you what kind of a regulation there is in Canada outside of the regulation placed on the power sold by the Provincial Government itself?



Mr. FLEMING. There is none. Nothing but a commercial competition, and of course the competition is giving place to the hydro-electric power, which is so cheap.

Mr. COOPER. Do you think that if these restrictions were removed it would be advantageous for the United States?

Mr. FLEMING. Yes, sir.

Mr. COOPER. Well, why, as a Canadian, should you desire the United States to get that? You are having an eye on Windsor?

Mr. FLEMING. Yes, sir; I am interested in Windsor getting cheap power. It cheapens the rate of power all along the line from London to Windsor, and that is where we get a large benefit.

The CHAIRMAN. In other words, you are in favor of Detroit getting this power, incidentally because Detroit is going to help you get this power for Windsor?

Mr. FLEMING. Yes, sir.

Mr. RICHARD B. WATROUS. I am the secretary of the American Civic Association. I sympathize with the difficulties of Detroit that wants some cheap light. If the obstacle which stands in your way is removed, aren't you satisfied that you get that 25,000 horsepower?

Mr. FLEMING. Yes, sir; that is all I am asking for, but that is outside of the question of policy that I have discussed here, whether you should come in and restrict importation into the United States.

The CHAIRMAN. Now, is there any gentleman from Buffalo or Niagara Falls or the State of New York who desires to be heard briefly, and who wants to leave to-night? Mr. Bowen, how long do you think it will take to conclude your argument?

Mr. BOWEN. I wish to speak of one thing.

The CHAIRMAN. Major, do you desire to say anything in regard to the statement made by the gentleman from Canada?

Maj. W. B. LADUE. Just a few words.

#### STATEMENT OF MAJ. W. B. LADUE.

Maj. LADUE. I am in the Corps of Engineers, from the office of the Chief of Engineers. There is very little that I would care to say on this subject unless I am asked for more information.

The request for this permit has been made to the Secretary of War, but, so far as I know, it has not been coupled with any request that the permit of the Electrical Development Co. be revoked or modified in anyway. I say this because that has been touched upon in the argument. So far as I know the question of the revocation or modification of that permit, or taking away water and giving it to somebody else, has not been raised. I don't know what the Secretary would do on that subject.

Mr. LEGARE. You do know that his attention has not been called to the fact?

Maj. LADUE. So far as I know there has been no complaint made to him that they are not using their permit. Now, there is a provision in the Burton law which gives the Secretary of War the right to grant additional permits over and above 160,000 horsepower, and this Detroit company has been informed of this provision, and of the conditions under which additional permits can be granted. They have submitted certain statements which are now under consideration

by the Secretary of War; so this Detroit company is not altogether cut out of getting a permit because of the fact that there is an existing permit. I don't come here with any instructions touching this permit, because nobody in our office knew the matter was going to be brought up.

The CHAIRMAN. The Secretary, in granting these permits, did not charge anything for them? They were given gratis?

Maj. LADUE. Yes, sir; free.

The CHAIRMAN. If the Secretary of War should grant the permit for the additional 4,400 feet he would give it gratis?

Maj. LADUE. Yes, sir; I presume so.

The CHAIRMAN. But the State of New York would charge for it?

Maj. LADUE. That I don't know.

The CHAIRMAN. But the State of New York does charge for permits, doesn't it? They bring in a revenue to the State?

Maj. LADUE. I don't know, sir.

The CHAIRMAN. I would like to have you state the position of the War Department, so that we will know whether to give the power to the State or continue to lodge it in the hands of the Secretary of War.

Mr. GARNER. It ought to be stated that under the Burton law the Secretary of War would not have any right to charge for the permit. But if Congress should lodge this power in the Secretary of War, and Congress did not require any payment for it, he would not be allowed to charge for the permit. Whereas if he was allowed a fee, then the Secretary of War could charge that fee.

Now, I remember about the permit question. We had a special session last summer when the matter of the extension of the Burton Act was before this committee, but on account of the time limit and the unknown merits of the case, we decided to report a bill extending it until March 1. At that time this identical question of power being furnished to Detroit was before this committee and some statements made about it. That is my recollection.

The CHAIRMAN. That is right.

Mr. GARNER. I was somewhat surprised to learn that the Secretary of War's attention had not been called to the fact that this company was only using a small portion of its permit, and another company clamoring for an opportunity to enter the United States with this power. When you made the statement to-day that his attention had not been called to it and that the matter had not been touched upon it was a surprise to me.

Maj. LADUE. What I intended to say, Mr. Garner, was that, so far as our office knows, it has not been attacked. That is, no papers have come to us; but what has happened in the Secretary's office I don't know. There is one other matter I would like to comment on at the same time—

The CHAIRMAN. A little later, Major.

#### AFTER RECESS.

The committee reassembled at 2 o'clock p. m.

The CHAIRMAN. The committee will hear from Mr. Monahan.

**STATEMENT OF GEORGE F. MONAHAN, OF DETROIT, MICH.**

The CHAIRMAN. Will you be good enough to give the reporter your full name?

Mr. MONAHAN. George F. Monahan, Detroit, Mich., representing the Electrical Distributing Co., and the Federal Electric Light & Power Co.

I might say, by way of prelude, that the Federal Electric Light & Power Co. and the Electrical Distributing Co. are practically, for all practical purposes, identical corporations. In other words, the Electrical Distributing Co. is a company organized under the laws of the Dominion of Canada, with a permit from the Canadian Government to export power from the Canadian side to the Detroit side of the river. The Federal Electric Light & Power Co. is a company organized under the laws of the State of Michigan. It is, in a sense, a subsidiary company, organized for the purpose of fulfilling that part of the law which, as we interpreted it, required the formation of a company on this side of the river in order that there might be a permit granted by the Secretary of War to a company upon this side to receive as well as a company on the other side to transmit.

We are asking that the situation as presently extant be so arranged as to permit the transmission of power from Niagara Falls to the city of Detroit. Perhaps it might not be amiss for me to give to the committee a brief résumé of the facts leading up to our attempt to secure Canadian power for the city of Detroit. I assume that the committee is more or less familiar with the situation upon the Canadian side relative to the distribution of power. I need not enter into the activities upon the part of the Civic Federation, so-called, back in 1905 directed toward the preservation of Niagara Falls. Power companies had already at that date been established, and subsequent to their establishment the Canadian Government, possibly realizing the possibilities of the situation from the standpoint of their own citizenship, determined to embark in the enterprise of supplying to the Canadian people power at a cheap rate. As a result of their activities the so-called hydroelectric commission was formed, consisting of two members of the cabinet and one member of parliament, which commission has been continually in existence up to the present time. That commission contracted with the Ontario Power Co. for delivery to the commission—which represented the Dominion of Canada or rather the Province of Ontario and in a sense the Dominion, as I understand it—certain of the power which the Ontario Power Co. was then developing. Contracts were made for the delivery to the hydroelectric commission by this company of one-half of the amount of power that was then being generated.

The manner in which the hydroelectric commission operates, briefly, is this: It procures estimates as to the cost of building transmission lines from the Falls to a particular municipality which desires to have the power extended to that municipality from the Falls. The municipality itself votes upon the proposition as to whether or not it desires Niagara Falls power. Estimates are had as to what the cost will be. The actual cost to the Government of the transmission is based upon the municipality in the way of a charge, and the municipality itself has, as its particular business, to establish transmission lines through the municipality itself, and transforming sta-

tions. The power is given to the city at cost. As a result of these activities many of the cities in Canada were supplied and are at present being supplied with Niagara power. The reduction in cost, according to statistics, with which I have somewhat familiarized myself, is varied, according to the distance of the city itself from Niagara Falls. I am credibly informed that in one of the municipalities the reduction amounted to over 60 per cent. Detroit parties became interested about two years ago for the purpose of securing from the Dominion Government authority to export and for the purpose of procuring a contract with the hydroelectric commission for the delivery of power in the city of Detroit.

Mr. COOPER. By reduction, do you mean as compared with the power generated by the use of coal?

Mr. MONAHAN. I do; yes, sir. The contract was finally entered into, but after very energetic work displayed upon the part of the citizens of the city of Detroit who were especially interested. As an indication of the probability of this idea becoming reflected in reduced cost of electricity to the citizenship of Detroit, the company then operating in the city of Detroit used every means within its power and command, both in the municipality of Windsor, in the Ontario Government, and in the Dominion Government itself, to prevent any contract being made, or any export permits being granted for the purpose of bringing that power from the Dominion of Canada into the city of Detroit. However, the hydroelectric power commission finally entered into a contract with our people whereby we were to receive power from them as soon as we could complete the formalities on this side of the river. That contract is now signed and has been in existence for some period of time, awaiting its completion until the difficulties involved in the Burton bill had been obviated.

Mr. FOSTER. Are you getting electricity yet?

Mr. MONAHAN. No, sir.

One of the provisions of that contract, and upon which by contract we have already obligated ourselves, is that we shall deposit a half million dollars as a guarantee with the hydroelectric commission, and the amount of \$250,000, the first amount required under the contract, was deposited. It was deposited on faith of the treaty. The treaty relations which have been in existence between this Government and the Dominion of Canada, ratified, I believe, in 1910, and further brought into effective existence by the appointment of a commission upon both sides of the river within the past year. Relying upon the treaty and believing that the treaty was, as we still believe it to be, the supreme law of the land, this contract was entered into and moneys deposited.

Now, we ask at the present time that the limitations contained in the Burton Act with reference to restricting the importation of power into the United States from Canada be removed. We are relying in that request not only upon the fact of the treaty itself, which should be the supreme law of the land, but upon the further fact, as has, I think, been satisfactorily demonstrated to the committee, that the transmission of power from the Dominion of Canada into the United States is not going to interfere with navigation and is not going to interfere with the beauty of Niagara Falls. We are not concerned, I may say, at this time in the least with the question of whether or not on the American side the present restrictions of the Burton Act

should be lifted. In other words, it makes no difference to us whether the amount at present allowed—15,600 cubic feet per second—on the American side is restored to 20,000 cubic feet per second, as named in the treaty, or not, because our power is to come from the Canadian side.

Let me insist, however, that not only in its spirit is the treaty broken by the restricting of importation from Canada into the United States, but it appears to me to be a fact that we are doing something which is restrictive upon the best interests of the people of the United States who have an opportunity to get this power cheaper. We have tentatively placed ourselves upon record in the city of Detroit by papers filed with the common council of that city, guaranteeing at the very outset of the importation of this power the reduction of the present prevailing rate, which is fixed by ordinance, by 20 per cent.

Mr. DIFENDERFER. What is that agreement you have entered into for a rate?

Mr. MONAHAN. The records themselves of the city of Detroit fix the rate at which power may be sold in the municipality by the corporations which are doing business.

Mr. DIFENDERFER. The price per horsepower?

Mr. MONAHAN. The price per horsepower, according to my recollection, is \$88 per horsepower for power purposes and \$113 per horsepower for lighting. That is what commonly goes into the hands of the companies. Now, as to the absolute accuracy of the figures that I give on that subject, I am not prepared to speak, but it is approximately that. At all events our contract is that whatever rate is established in the city of Detroit at the present time, according to the records of the city of Detroit for the sale of power by the corporation now doing business in the city of Detroit, our figure is to be 20 per cent less than that. Is that definite?

Mr. DIFENDERFER. Yes.

Mr. COOPER. If that contract is accepted would the city ever have an opportunity to lower the rate?

Mr. MONAHAN. Yes, sir; not only that, but it has put those words into our tentative arrangement upon which we proposed to be bound, that the municipality at any time desiring to obtain the rights of distribution belonging to the resident company, which I represent here, may purchase whatever rights that company has at a figure to be fixed by arbitration, and establish municipal ownership. So that we are to an extent under the control of the city itself, and we are perfectly willing to be. The point I desire to insist upon is that by restricting the importation of this power into the United States an injustice is done to the citizens of the United States who have an opportunity to get this power, and the injustice is done, furthermore, without any right reason for it, because different experts have stated here that the importation of this power into the United States is not going to interfere either with navigation or with the natural beauty of Niagara Falls.

Further than that Congress, of course, as we all know, has absolutely no jurisdiction over what the Canadians will do with the 36,000 cubic feet per second. They can use all or none of it and we have no authority to say nay. The development of the matter during the past year in the Dominion Government itself has been such as to indicate very clearly, as has already been stated by Gen. Bixby before

this committee, that within a period of three or four years the Canadian Government, or rather on the Canadian side, every particle of power which is available under the treaty will be used by Canada. Now, it appears to me to be an elementary proposition that if some of the people of the United States have a chance to be benefited by this power at this time, they should be allowed to receive that benefit instead of the benefit going to the Canadians themselves. They have more than we have by way of right to take from the falls for the purpose of generating power, and this is the only way we have an opportunity to get some of what some might consider to be what the United States might be justified in receiving by reason of the fact of their connection with the falls themselves.

Mr. SHARP. Assuming that this restriction is removed, is it your understanding that you will then be able to get power from the Canadian side without increasing the limitation at present fixed upon their rights?

Mr. MONAHAN. The question is not very clear to me.

Mr. SHARP. Suppose that the amount of power now taken by the Canadian Power Co. remains where it is, but the restriction as to importing that power over here is removed, do I understand that the city of Detroit could still get power without increasing the amount that the Canadians now get? That is, is there any left for them to receive?

Mr. MONAHAN. Now?

Mr. SHARP. Yes, sir.

Mr. MONAHAN. Under present conditions?

Mr. SHARP. Yes, sir; with the restriction off of importation.

Mr. MONAHAN. Not as fixed in the Burton bill, according to my understanding of the situation.

Mr. SHARP. Then your contention would be that what you ask is not only that the restriction be removed but also the full limitation allowed under the treaty?

Mr. MONAHAN. Exactly, so far as importation is concerned. In other words, I go this far—

Mr. FOSTER. You do not understand—

Mr. MONAHAN. Perhaps I do not; but I answer according to my own light.

Mr. FOSTER. He wants to know if you ask for anything more than the removal of the embargo upon the importation of electricity?

Mr. MONAHAN. That is what we ask.

Mr. FOSTER. And he wants to know, if the embargo is removed and no further authority is given to Canada to take power from the falls, whether Canada would still have some excess electricity still to sell to you?

Mr. MONAHAN. Oh, unquestionably.

Mr. FOSTER. That is your question?

Mr. SHARP. Yes, sir.

Mr. MONAHAN. Unquestionably; there is no doubt about that whatever. In fact, Canada has not used anywhere near the full capacity of its limit under the treaty at the present time.

Mr. FOSTER. Mr. Chairman, for Mr. Sharp's benefit I would like to ask one question. The amount that Canada can take at the Falls is limited by the treaty agreement, just as the amount we can take?

Mr. MONAHAN. Exactly. There is no doubt about that whatever

Now, then, the fact that we can supply our citizenship in the city of Detroit with power at a less figure than is now fixed, supplies to my mind an irrefutable argument, in view of the statements with regard to not destroying the Falls, and the further statement of our not being able to draw on the Canadians' 36,000 cubic feet per second why the embargo should be removed and we be permitted to proceed along the lines of our contracts.

Some suggestion has been made with reference to the impracticability of bringing power that distance. I would not for a single moment offer my individual opinion in opposition to the opinions given by experts upon this subject, because I do not pretend to be an expert upon electricity or electrical power or its transmission, but the furthest that anyone has gone thus far in that connection is to say that it is a possibility but not a probability. On that score our own experts, whose decision upon the subject I voice, have declared that it is entirely possible and entirely feasible; and the best demonstration of the fact that it is not only possible but feasible is that the Canadian Government is ready now to build its transmission lines from London, Ontario, to Windsor, Canada, for the purpose of supplying Windsor with light; and if the Canadian government and the Canadian electrical experts conversant with this situation are willing to do that, then I think we can fairly well take a chance on it. Furthermore, we are willing to take our stand upon the decision of our experts coupled with the Canadian experts, and if it fails the only persons to lose are ourselves.

Mr. SHARP. To whom would you distribute this power; to what class of purchasers or customers?

Mr. MONAHAN. To all classes.

Mr. SHARP. Consisting largely of manufacturers?

Mr. MONAHAN. Oh, we should distribute to manufacturers and customers generally in the city of Detroit, for lighting purposes in residences and homes as well as to manufacturing institutions.

Mr. SHARP. Would it go to the city itself for lighting?

Mr. MONAHAN. The city has at the present time a municipal lighting plant with which it does its own lighting, but it is entirely within the possibility of things that the city might want to take our light at the reduced cost at which we could deliver it within the confines of the city of Detroit.

Mr. SHARP. There is a separate company organized, I suppose, under the Michigan laws, at least in Detroit, to handle this power that you get from the Canadian side in the event this goes through?

Mr. MONAHAN. Yes, sir; the Federal Electric Light & Power Co.

This, gentlemen, is very briefly an outline of the situation that I desire to suggest and present to your committee. I had in mind to discuss the matter rather more extensively than I have presented it, but I find upon listening to the subject made by Gen. Bixby and by Gen. Green and others that many of the features that I thought might be necessary to be covered for the purpose of clearness have already been fully developed and conclusively covered by them. I will therefore say in conclusion, insisting upon the fact that the treaty should be the law of the land and insisting further upon the fact that we are only asking to be allowed to take this power while we have a chance to get it, while in three or four or five years that chance may

have passed and our people have been deprived of the chance to use the power from the Canadian side. In view of those circumstances, it would be, in our opinion, incumbent upon the committee to advise that the restrictions upon the importation of power at this time be removed. If there are any further questions, I shall be glad to answer them.

Mr. SHARP. How long is this contract for?

Mr. MONAHAN. We have the contract during the term of the existence of the Ontario Power Co.—approximately 30 years.

Mr. COOPER. If this power goes to Detroit, of course it will go to Windsor, Canada, also?

Mr. MONAHAN. Yes.

Mr. COOPER. And when the power reaches that city the municipality of Windsor will distribute it?

Mr. MONAHAN. No, sir; it will distribute it to its own people, but it will not distribute it to us.

Mr. COOPER. That is what I mean. I understand that, but the municipality of Windsor and not a corporation formed for the purpose of distributing electricity will distribute this power to consumers in that city of Windsor?

Mr. MONAHAN. Yes, sir.

Mr. COOPER. And at cost?

Mr. MONAHAN. Yes, sir.

Mr. COOPER. With no profit?

Mr. MONAHAN. Yes, sir.

Mr. COOPER. And therefore at a less cost than it will be distributed to consumers in Detroit?

Mr. MONAHAN. Yes, sir.

Mr. COOPER. So no effort will be made in the city of Detroit to have the municipal council enter into a contract by which it could directly secure this power?

Mr. MONAHAN. I have no knowledge of any such effort made by the council of the city of Detroit. In fact, I can definitely state that no effort has been made by the municipal authorities themselves.

Mr. COOPER. If you do secure the contract with the Ontario people, you could not get it anyway?

Mr. MONAHAN. That is true, but at the same time we do not preclude the city from doing it if they see fit to do it. We saw the situation and took advantage of it. If the municipality had seen fit to do it, I do not suppose the citizens would have made any effort in that regard.

Mr. COOPER. It is only recently, Mr. Monahan, isn't it, that the generation, the insulation, and the carrying of the electric current for so long a distance as 220 miles has been considered feasible practically and profitably?

Mr. MONAHAN. I think that what you state is in a sense true.

Mr. COOPER. So the city could not be justly charged with laches because it did not get hold of this as quickly as you did? I do not mean, of course, that you were not perfectly justified in what you did.

Mr. MONAHAN. Certainly; I did not intend to charge neglect on the part of the authorities of the municipality of Detroit at all.

Mr. HARRISON. Have you given any study to the legal proposition as to whether or not we have legal jurisdiction over the transmission



of power from Canada into the United States, or whether or not that is a matter coming within the jurisdiction of the States?

Mr. MONAHAN. I have given the subject some study and I think that, in so far as the importation of current from the Dominion of Canada into the United States would constitute an interference with navigation, possibly under that construction the United States might have some jurisdiction.

Mr. HARRISON. Over the regulation of rates that would be charged by power companies?

Mr. MONAHAN. I doubt that very seriously. I would say in further answer to the question, a certain bill has been presented by Congressman Smith, covering this subject and maintaining that we should be obliged, on the American side, both at Buffalo and at the city of Detroit, to sell our power at the same price that it is sold for in Canada. I do not intend to waste much time before the committee on any such proposition, but merely advert to it. The Canadian Government builds its own transmission lines, it sells to its own people at cost. We can not, by any possibility, compete with any such proposition as that announced in that bill. We would have to sell for more than it sold for in Canada in any event, because we are farther distant than Canada, and in the second place, we have got to pay to the Dominion commission at the city of Detroit, for power, 10 per cent more than the city of Windsor pays for it. So it is absolutely impossible that that can be done; and furthermore, as a matter of argument, I would say that the fact that we can not possibly do it is no argument against our doing the best we can and getting it at a very substantial reduction anyhow, over the price we are forced at the present time to pay companies which generate electricity from some power other than water power.

Mr. DIFENDERFER. Mr. Monahan, you have presented this case, in my judgment, very clearly, and that has prompted me to ask this question: Whether, in your judgment, it would be feasible to have this matter in charge of the Interstate Commerce Commission, and charge the Interstate Commerce Commission with the distribution and regulation of this electricity.

Mr. MONAHAN. The question is a new one to me as to whether or not it would involve further enabling legislation in order to put the matter at all under the jurisdiction of the Interstate Commerce Commission is a question that I would not care, at the present time, to offer any opinion upon which would be of any substantial value to this committee; but I do say this: That so far as we are concerned, from a more practical standpoint, if this committee, after full deliberation of the subject, comes to the conclusion that it has such jurisdiction over the importation of power to the United States from Canada, we are perfectly willing to be placed under any reasonable regulation in that regard, which, in the judgment of this committee, is requisite and desirable in order to preserve the rights of the citizenship of our town.

Mr. DIFENDERFER. The reason I asked that question is this: I am a representative of Pennsylvania. A certain portion of our State is quite close to where this power is transmitted. New York has its commission; Pennsylvania has none; Ohio has no commission, nor has Michigan, as I understand it.

Mr. MONAHAN. Michigan has a commission.

Mr. SHARP. Would you claim, Mr. Monahan, later on, after you had this contract, that it was a question of vested rights, and that therefore Congress had no power to intervene, as the riparian holders now claim; that it is a vested right that we can not interfere with?

Mr. MONAHAN. I can not answer for the future in that regard.

Mr. SHARP. What would be the temptation?

Mr. MONAHAN. I think the temptation would be very great.

Mr. COOPER. Your present opinion is that you would yield to it?

Mr. MONAHAN. If you are asking me for my individual opinion, and what I would do, I think I would yield to that temptation; yes, sir; but I can not tell whether or not the company itself would feel more generous.

Mr. DIFENDERFER. It would be well enough to safeguard it from the beginning?

Mr. MONAHAN. On the part of the Government?

Mr. DIFENDERFER. Yes, sir.

Mr. MONAHAN. I think that would be judicious; yes, sir.

Mr. DIFENDERFER. You are very frank in your statements.

Mr. MONAHAN. If I should say anything else, I know the committee would know I was not representing the facts. If there is not anything further, gentlemen, I thank you for your time.

The CHAIRMAN. We will now hear from Mr. Scovell. You can proceed, Mr. Scovell.

#### STATEMENT OF J. BOARDMAN SCOVELL, OF BUFFALO, N. Y.

The CHAIRMAN. Whom do you represent, Mr. Scovell?

Mr. SCOVELL. Simply myself, as a citizen of the State of New York and a resident of the Niagara frontier.

Mr. CURLEY. Do you represent any of the companies that are operating in that vicinity?

Mr. SCOVELL. I do not. For nearly six years the Rooseveltian Republican policy of standpat has applied to the Niagara power situation in the Burton legislation, and therefore I come before you to-day with the immense relief that we have a committee with a chairman and majority in favor of a policy by reason of their political views, which coincides with that of the State of New York, or the officials of the State of New York who are pledged to see the utmost made available at the earliest possible time of our natural resources.

I feel that it is necessary for me to review somewhat the history of the position of the State of New York, in the past, now, and what it should be, with relation to the Niagara Falls park, both from the standpoint of scenic beauty and of Niagara Falls power development, and these things necessarily touch upon what has been done on the Canadian side. As long ago as 1884 I remember with great pleasure having attended the opening of the New York State Park, purchased at great expense by the State of New York, and placed under the control of a commission in order that the public—not merely the public of New York State, but of the entire United States and of the whole world—might have access to the beauties of Niagara free of cost. They removed all things which could be considered an eyesore in the district included by the park. Mills, which formerly stood on Bath Island, now called Green Island, after Commissioner Green, and anything within the territory which tended to affect or injure the scenic beauty were removed. This park extends up

Niagara River to what is called Port Bay, or the entrance to the canal of the Hydraulic Power Co. It extends out into the Niagara River to the international boundary line. It extends down, following the international boundary line, to the properties at the outlet of the Hydraulic Power Co.'s canal, New York State itself being the riparian owner, as I understand, between the intake and the outlet of the Hydraulic Power Co.'s canal.

If you will take the time to glance at a little circular which Gen. Green has furnished to each member of your committee, on the first page you will see a picture of Niagara Falls. If you have this before you it will enable you to understand the topography somewhat better than you otherwise would, the important factor being that the State park, which includes the islands which separate the American channel from the Horseshoe channel—the line of breakers comes below the head of Goat Island, and the State park extends above the line of breakers approximately half a mile. On the Canadian side you will see, near the crease in the center, one power plant at the right hand and another at the left. The one at the right is the Canadian and Niagara Falls Power Co.'s plant; the one at the left is the Electrical Development Co.'s plant, both up there below the line of breakers. It is apparent that it is a physical impossibility for the water taken by those two companies in anywise to affect the flow of water over the American Fall. The State of New York in creating the New York State Reservation of Niagara specifically provided in the act that no water should be diverted inside the park limits for power purposes, and so it came about that no water is now diverted by the companies taking power, nor have any rights been given under other charters to other companies to take water from Niagara River above the Falls, except at points above the New York State reservation.

The CHAIRMAN. How many acres are there in the Niagara Park?

Mr. SCOVELL. I could not estimate it. I should say that up the river it varies from a width of 300 feet to perhaps 600 feet, lower down, including the bed of the stream and the islands in the stream to the international boundary line.

The result has been, however, that on the American side the power companies taking water for power purposes take it from what is known, as you will find in the report here, as the Grass Island Pool. Consequently they divert from a point sufficiently far up the river and from the two channels in proportion to the relative flow from either. In the report of the engineers, which is before you, you are informed that there are practically 10,000 cubic feet per second going over the American Falls, and the balance of 205,000 cubic feet per second is going over the Horseshoe Falls.

Mr. SHARP. How much over the American Falls, did you say?

Mr. SCOVELL. Ten thousand cubic feet per second.

Three years after we opened our park on the American side the Ontario government, in celebration of Her Majesty's Jubilee, created on the Canadian side a park system, opened it to the public, and gave to a commission appointed by it supreme power over that park. I was employed as counsel in the case of the Queen v. Colt, in which were developed the rights of the park commission with respect to the whirlpool and the rights of the Dominion Government of Canada, as compared with those of the Ontario government, to control the

bank of Niagara and the waters, it being determined in those proceedings that they lay in the Province of Ontario. After the creation of these State parks—the State park on the American and the Provincial park on the Canadian side—there arose an agitation for the harnessing of Niagara, and the State of New York granted in the neighborhood of 12 different charters to take water from Niagara, all of which have been repealed with the exception of 3—1, the Hydraulic Power Co.'s rights are not by charter from the State, they being an organization under the stock corporation law, whose rights as riparian owners have been given by legislative act rather than by charter rights from the State. The first of these charters was granted to citizens of the city of Niagara Falls in the year 1886. And the company was known as the Niagara River Hydraulic Power, Tunnel, & Sewer Co., and by several acts mandatory of that we now have under that original act the Niagara Falls Power Co., the pioneer company in the development of electric power from Niagara waters, the Hydraulic Power Co. having been there for many years and having diverted water from Niagara River, not for the purpose of generating power or for the production of hydraulic power, their rights to the production of electric power having followed those of the Niagara Falls Power Co.

In the year 1891 certain residents of the village of Lewiston acquired a charter known as the Niagara County Irrigation & Water Supply Co. for the purpose of bringing water by a public waterway from the upper river to the lower river in order to supply pure water to villages and in order to generate power. In 1894, three years later, residents of the city of Lockport applied to the legislature and acquired a charter to take water from Niagara River, via Lockport to Lake Ontario, and that charter is still unrepealed, but they did not comply with the requirements with respect to canal construction and that charter is now the Niagara, Lockport & Ontario Power Co., which distributes for the Ontario Power Co. of Canada through western New York and which Gen. Green represents before you as its president.

It was the policy of the State at that time to grant the rights for the production of power because of the agitation for the harnessing of Niagara. This was accomplished, as I said, by the Niagara Falls Power Co., the initial installation being something like 15,000 horsepower, their charter rights being for 200,000 horsepower, 100,000 by a tunnel, and a like amount, if they subsequently so decided, by another tunnel.

Later still, in 1896, the hydraulic company obtained from the State of New York, by a vote, two-thirds being present and voting, confirmation of its right to take water. All of the other charters, granted to all of the other companies, had been granted, three-fifths being present. In 1895 I was retained by the Niagara Irrigation & Water Supply Co., and for 11 years was its attorney. I wish to correct Mr. Bowen's assertion of yesterday that I am its attorney; I was its attorney. Since the 1st of July, after the passage of the Burton bill—9th of June, 1906—I have not represented that company, but for 11½ years I did represent it, and thereby became familiar with the conditions at Niagara. My home being at Lewiston, on the Niagara, and my law practice in Buffalo, I have become familiar and kept so as to the conditions surrounding the development. Prior to

the enactment of the Burton bill, except for the restriction of 200,000 horsepower for the Niagara Falls Power Co. and except for the restriction of the size of the canal for the hydraulic company, which made it possible for them to take 95,000 cubic feet, there was no restriction, both the Lockport and the Lewiston companies having no restriction placed upon the amount they might take. When the agitation came for the preservation of the Falls all the outstanding charters except those mentioned were canceled by act of the legislature. Negotiations for the construction of the canal from the upper to the lower river had been completed to the extent of the underwriting of the securities in March, 1906, and about \$325,000 had been expended at that time. The passage of the Burton bill held up, and is still holding up, any possible development under that charter. You will find the hearing before the Rivers and Harbors Committee on the Burton bill in 1906, pages 15 to 45, the position of that committee at that time.

When the Burton bill was passed it recited its purposes as they have been brought before you at this session and the several conditions as to the navigation of the river; its effect on the Great Lakes; its effect upon the boundary and upon the scenic beauty have all been fully reported upon to you in the report of the War Department, as was required by the terms of the act itself. But there are certain things in connection with that act which I feel it is important to call to your attention, and one of the first is this: That in the grant of the right to take 15,600 cubic feet of water from Niagara River for power purposes to the companies then actually producing power, that was conditioned in two different ways. The first was, "But permits for diversion shall be issued only to corporations as aforesaid and only to amounts now actually in use or contracted to be used in factories the buildings for which are now in process of construction." That restriction made it impossible, until there should be a change in the Burton law, for the use in the United States of any more power generated on the American side than was then either actually produced or under contract. So that from that time until now, if that was truly carried out at that time, there would have been no opportunity for an industry to come to Niagara to purchase Niagara Falls power as a new proposition. It was only power that was previously contracted for which could be generated. They went on with their power development for the purpose of completing it and fulfilling the contracts previously made. We have, therefore, been limited to the importation of power from the Canadian side under the permits granted by the Secretary of War up to 160,000 horsepower for the development of new industries.

There is another factor, however, of the Burton bill of still greater importance, and that was this additional limitation that we heard nothing about in all the discussion here:

No revocable permits shall be issued by the said Secretary under the provisions hereafter set forth for the diversions of additional amounts of water from said river or its tributaries until the approximate amount for which permits may be issued as above, to wit, 16,200 cubic feet per second, shall for a period of not less than six months have been diverted from the waters of said river or its tributaries.

There was no intention at the time of the passage of the Burton bill to stop the development of power from Niagara water. An opportunity was given to the companies then actually producing power to

actually divert 16,600 cubic feet, to have that condition continue for a period of six months and then the Secretary, having determined by his observations whether or not the scenic beauty of Niagara had been damaged, could go further and grant additional permits either to those companies or to any other companies which had the right to take water from Niagara River for power purposes under authority given to them previously by the State of New York.

Mr. COOPER. That seems to me one of the most striking things that has been disclosed in this whole discussion and one of the most vitally important. Now, let us see if I interpret that correctly. If they did not use up to the maximum what they were allowed under that act, there was no way for the Secretary of War to issue a permit to anybody else, was there?

Mr. SCOVELL. There was not.

Mr. COOPER. And all they had to do to block him was to go not quite up to the maximum?

Mr. SCOVELL. They have not yet reached the maximum, and nearly six years have elapsed, although at that time the whole output up to that maximum must necessarily have been contracted, and they have not made other contracts.

Mr. COOPER. Exactly; that is why yesterday I thought that there was something the matter with the discussion about the failure to issue permits. If they did not use all they were entitled to use under that permit, the maximum amount for six months—

Mr. SCOVELL. That was on the Canadian side.

Mr. COOPER. Well, say on this side—and the Secretary of War, then, would have no opportunity to see what the effect on the Falls was, up to that maximum, would he?

Mr. SCOVELL. No.

Mr. COOPER. And therefore he could not issue any new permit?

Mr. SCOVELL. No; and he has issued no new permits.

Mr. COOPER. He could not. All they had to do to stop it was to not use the amount they were entitled to use.

Mr. WATROUS. Do you think there is a maximum clause that applies to the Canadian side?

Mr. SCOVELL. I do not know anything about that; I could not say.

Suffice it to say, under the provision of the Burton Act up to such time as a treaty should be reached there was no reason why up to that time additional grants of power might not have been made.

Mr. SHARP. How much was that of the maximum amounts?

Mr. SCOVELL. I could not say exactly; it is in the reports here. It is very near. Do you know, Mr. Brown?

Mr. BROWN. I can not say exactly. We have been using all of our water.

Mr. DIFENDERFER. My recollection is it is 13,800 cubic feet per second, and they are permitted to use a total of 15,600. My recollection is it is 13,800 at the present time.

Mr. BROWN. May I ask a question? If the maximum in any one second were 15,600, we will say, then as a matter of practical operation, if a company or combined companies were prohibited from using as a maximum in any one second a quantity beyond 15,600, as a matter of practical operation could you expect that for a period of six months you would find an operation that would average anything except something less than 15,600?

Mr. SCOVELL. I think the interpretation would be put on that, at the rate of—such as you desire to put into the new act.

Mr. BROWN. We can arrange the new act all right. But is it not a fact that the engineers have construed the present act to be the maximum in any one second?

Mr. SCOVELL. I think that is true, Mr. Brown, but at the same time there remains undeveloped water of the hydraulic company under the terms of their contract.

Mr. DIFENDERFER. This difference remains, between 13,800 and 15,600?

Mr. SCOVELL. That is the difference. There has never come a time when they have had 15,600 cubic feet of water diverted for the generation of electric power for any period of time sufficient to enable the provisions of that portion of the act to be applied and their company to apply for more power or any other company to apply to the Secretary of War for power.

The purpose of the act itself as recited in the fourth paragraph was that the President of the United States be requested to open negotiations with the Government of Great Britain for the purpose of effectually providing for such regulation of the water of Niagara River and its tributaries as will preserve the scenic beauty of that river, and it was because of that provision in section 4 that the company I then represented did not attempt to contest the constitutionality of the Burton Act. It would take longer to contest that successfully than it would to negotiate a treaty, and a treaty being the supreme law of the land we would be bound by it, and so our efforts were directed toward the wording of the treaty, and, as I understand, the two companies' efforts which were taking water from Niagara River, instead of being directed toward the testing of the Burton Act, were also directed toward the wording of the treaty, there never having been any test of the constitutionality of the Burton Act. It was continued from time to time until the present time, and it will continue until the 1st of March next. Personally I think the United States Supreme Court's decisions, by reason of the wording of the title, would probably result in the upholding of the act, although the intention was manifestly without the scope of the power of Congress.

Mr. SHARP. Did these two companies then frame up this treaty?

Mr. SCOVELL. I am reaching that. The next paragraph, however, of the Burton bill must be considered, and that is section 5: "The provisions of this act shall remain in force for three years from and after the date of its passage"—and that has been extended—"at the expiration of which time all permits granted hereunder by the Secretary of War shall terminate unless sooner revoked by the Secretary of War, and nothing herein contained shall be held to confirm, or establish, any rights heretofore exercised."

Because of the continuation of that act in that form, the President of the United States said to me that if Congress should adjourn—this was last spring—without having extended the Burton Act he would by Executive order permit the companies now taking water to continue to take water pending the action of Congress. So you can not allow the Burton bill to die and do nothing.

The wording of the fifth paragraph of the treaty itself says that the United States may authorize and permit the diversion. The

United States in authorizing and permitting does so under an act of Congress, and until there is congressional action there is no right to divert, and the present diversion exists only by reason of the existence of the Burton bill. With the death of that all permits are revoked that are outstanding. It is therefore necessary that some legislation be had between now and the 1st day of March, either authorizing the continuance of the present conditions or determining on a policy and following that, and I am here before you to-day, more particularly for the purpose of making some suggestions along the line of such legislation as your committee should see is passed in Congress under the fifth clause of the treaty.

The CHAIRMAN. In that connection, suppose the Burton law had not been extended by resolution of Congress what would be the consequence?

Mr. SCOVELL. The terms of the treaty specifically provided in section 5, "so long as this treaty shall remain in force, no diversion of the waters of the Niagara River above the Falls from the natural course of the stream shall be permitted except for the purposes and to the extent hereinafter provided." The treaty contained an absolute prohibition, and after the Burton bill expired, and after the permits thereby ipso facto were revoked, the treaty coming into effect, no one had a right to take water from the river pending congressional action, except as the President stated.

The CHAIRMAN. The Burton law expired last June, did it not?

Mr. SCOVELL. It did.

The CHAIRMAN. And Congress took no action regarding its extension until last August?

Mr. SCOVELL. Quite true.

The CHAIRMAN. Had all these permits expired during that time?

Mr. SCOVELL. Except as they were renewed by the continuation of the Burton bill.

Mr. GARNER. Let me get your conclusions, if I may. Your position is that if nothing is done until the 1st of March, the permits will all be revoked?

Mr. SCOVELL. It is so provided in the Burton Act itself.

Mr. GARNER. That applies to the Canadian as well as the American permits?

Mr. SCOVELL. Permits to import.

Mr. GARNER. Does that apply to American permits to take water from the Niagara River?

Mr. SCOVELL. It does.

Mr. GARNER. Now, you say that in case Congress did not take any action and the Burton law expired, the President would issue an edict?

Mr. SCOVELL. To hold things in statu quo until Congress acted.

Mr. GARNER. Has the President that power under our Constitution?

Mr. SCOVELL. I do not think so, but I think that is the wise way to do it.

Mr. GARNER. If that is true we might just as well adjourn and let the President settle the matters to suit his convenience.

The CHAIRMAN. Is it your contention, as a legal proposition, that the rights under these permits all expired last June when the Burton Act lapsed?



Mr. SCOVELL. At that time no one wished to contest the question; no one wished to stop the power. There was too much at stake.

Mr. GREEN. The Burton law expired on the 29th of June. We heard nothing from Washington and we went on with our business as usual. On the 21st or 22d of August the Burton bill was revived to the 1st of March. A few days after we received from the Secretary of War, without application, new permits reading exactly like the old ones.

Mr. COOPER. General, that would imply that the department extended the law just as Mr. Scovell said; new permits were issued?

Mr. GREEN. When the Burton law was revived.

Mr. SCOVELL. There was nothing done, because in that case there was no question raised.

Mr. COOPER. Exactly.

Mr. GREEN. I simply bring this matter before you as a committee to emphasize the importance of definite action on your part rather than allow things to go on and let the treaty be the supreme law of the land.

Maj. LADUE. Mr. Chairman, I can add a little to what Mr. Green has just said. When the Burton Act expired on June 29 we notified the officer in charge of the lake survey to stop his supervision of the operations of the power companies under their permits. Up until the 29th of June we had hoped that Congress would take some action, but no action having been taken we were not entirely clear in our own minds as to what we should do next. We proceeded to take the question under advisement to consider what should be our next step; the Burton Act being apparently dead, and the permits granted under its provisions being apparently dead. Before we had resolved upon the proper course to take, Mr. Chairman, Congress unexpectedly reenacted the Burton Act, whereupon we recommended to the Secretary of War that, the act being restored, the permits be immediately reissued under the old terms, to continue as long as the restored or revived Burton Act continued in force; that is, until the 1st of March.

Mr. COOPER. Major, did you consult, when the Burton Act expired, with any legal officer as to the effect that had on the permits? Or did you take it for granted that ipso facto they expired also?

Maj. LADUE. I presume the Secretary of War consulted with the Judge Advocate General; I think he did, sir. Of course, the chief of engineers did not take this action upon his own responsibility. He recommended it to the Secretary of War.

Mr. COOPER. And you consulted in your bureau with the Judge Advocate General?

Maj. LADUE. I think the Secretary of War consulted with him.

Mr. COOPER. The Secretary of War; and then you were informed—

Maj. LADUE. That our recommendation was approved.

Mr. COOPER (continuing). That when the Burton Act expired the permits expired also, and so you issued new permits when the Burton was revived?

Maj. LADUE. That was, essentially, the action taken.

Mr. COOPER. You looked upon the law as Mr. Scovell has here stated it?

Maj. LADUE. We understood it so.

Mr. SCOVELL. During the time that the treaty was under consideration, at the suggestion of the then mayor of Buffalo I came to Washington in opposition to the treaty, and I also was in communication with the Ontario Government in opposition to the treaty. The attitude of the city of Buffalo at that time being one in which they desired an opportunity to get power at better rates. They were called "the electric city," but we are not getting the advantage of being the electric city by reason of the fact that the power was sold at Niagara Falls by the Niagara Falls Power Co., to the Cataract & Conduit Co., which transmitted it from Niagara Falls to Buffalo, and sold it at Buffalo to the Buffalo General Electric Co., which distributed it from the conduits to the city, and there being necessarily three profits, of course the cost to the consumer in Buffalo was somewhat higher than Buffalo has expected.

The opposition to the treaty was twofold, but the principle was that the limitation of 20,000 cubic feet on the American side was too small. How that was reached has been explained to you here by reason of the reports of the engineers as to the amounts allowable to the full capacity of the plants of the two companies then actually producing power. At the hearing a year ago this month I made the assertion that the Niagara Falls Power Co. wanted 1,400 cubic feet more in order to complete its planned 100,000 horsepower development, and that the Schoelkopf (?) Co. wanted 3,000 additional feet in order to bring it from 6,500 to 9,500, the amount of water which a channel the size allowed by the act permitting it to take power would carry; and that those facts determined why the fact that 4,400 additional cubic feet of water was increased on the American side under the treaty. That was not admitted at that time, and I was therefore surprised and pleased that my guess, if such it was, of a year ago was repeated yesterday by my friend Mr. Brown. The additional 4,400 can be developed in that way between the two existing companies at Niagara Falls, and a question of riparian rights as between them has evidently been reached. The Niagara Falls Power Co. develops from 136 to 138 feet of head, obtaining approximately 10 horsepower per cubic foot. They have installed two wheel pits in each of which they have generators for the generation of 5,000 horsepower. They have installed 21 of such generators, making a total of 105,000 horsepower, one generator being held in reserve, as we are informed, for the purpose of switching in in case of trouble. The plant is considered and is called a 100,000 horsepower plant, but on the basis of 10,000 horsepower per cubic foot being produced and the limitation contained in the Burton Act to get the full capacity, 1,400 cubic feet more are necessary.

Mr. DIFENDERFER. If that 4,400 cubic feet a second were granted, would Buffalo receive any benefit in rates?

Mr. SCOVELL. From that particular company?

Mr. DIFENDERFER. Yes.

Mr. SCOVELL. I think not, unless some regulations were passed here or at Albany in regard to it.

Mr. CURLEY. You say you were engaged by the city of Buffalo?

Mr. SCOVELL. I say I was requested to come by the mayor.

Mr. CURLEY. And you also communicated with the authorities of Ontario?

Mr. SCOVELL. Yes.

Mr. CURLEY. Can you give the committee some comparison of prices to consumers at both places—Canada and the United States?

Mr. SCOVELL. Yes; I will reach that presently.

You will find from the report of the engineers that the Hydraulic Power Co., which was allotted 6,500 cubic feet of water under the Burton Act, if its canal is used to its full capacity can take 9,500, which is 3,000 more than the company now has authority to take, and that 3,000 at 1,400 makes the 4,400 which is in dispute at this time. That 4,400 was the increase given over the Burton bill by the terms of the treaty when the treaty was drafted between the two countries, apparently shutting off any other companies than the companies then producing power. That conclusion was fortified, in my opinion, when after the ratification of the treaty the so-called Alexander bill was introduced, definitely giving this 4,400 additional cubic feet of water to the companies then actually producing power.

Mr. SHARP. If these two companies did participate in putting the provision in the treaty, why shouldn't they shut off the power?

Mr. SCOVELL. Certainly; why shouldn't they?

We are coming to the position the State of New York should take at the present time. Of course, those things were comparatively easy of accomplishment at that time, I think. The Ontario Government wanted power to distribute in Ontario by its hydroelectric power commission. It was difficult to obtain it. The Niagara Falls Co. had a capital cost of \$160 per horsepower, and was in no position to compete with imported power, which could be sold, and is sold now, at \$9.40, as you were informed by Gen. Green. It is therefore important from the standpoint of an American company that a treaty should contain new provisions in regard to the importation of power, and I came here, as I said, at the request of the mayor of Buffalo to insist upon the insertion into the treaty of some provisions allowing power to be imported into the United States from Canada without question. The assurance was finally given by the Dominion Government and the Ontario Government that an export duty would be imposed upon power to be shipped out of Canada unless power was sold in Canada to the hydroelectric power commission at reasonable rates. Their opposition, therefore, was withdrawn to the treaty, and so we have a treaty to-day in which there are no regulations as to the importation of power, we being limited as it stands to-day to the pledge of the Government of Canada to the power companies of permission to export half of their power to the United States, which, however, Canada having a parliamentary form of government, is subject to change.

I was connected with a company which exported natural gas from Canada to supply the city of Buffalo. The Dominion Government required us to pipe from our field to Niagara Falls, Ontario, at an expense of an assessment of 150 per cent, which would be considered confiscatory here. And after that had continued for two years absolutely, it forbade us fulfilling our contracts in the city of Buffalo and required us to sell it all in Canada, which is one of the advantages which a government under parliamentary law, which is not obliged to recognize the obligation of contracts, has over a constitutional government.

Mr. LINTHICUM. Does Buffalo get gas from Canada now?

Mr. SCOVELL. No.

Mr. LINTHICUM. How long has that been?

Mr. SCOVELL. Two years.

The power company, as was told you day before yesterday by Mr. Wicks, has never needed funds. It has been in the position to install the best that could be had. It has the best engineers and the best all along the line. Its financial position—with John Jacob Astor and B. O. Mills on its board—gave it a financial position which is unquestioned. Its political position was assured with Mr. Mills, son-in-law of Mr. Reid, and with Senator Depew—

Mr. COOPER. Ambassador Reid?

Mr. SCOVELL. Yes; he was son-in-law of the then president. The political position of the company and the financial position of the company made it possible for it to have as strong a position as Niagara Falls itself has in hydraulic [laughter], so that the treaty as we have it limited the United States to 20,000 cubic feet per second. We have got the 20,000 cubic feet, and there are no strings on it. The question now comes, what shall we do with it? The Alexander bill was introduced to provide that it should be given to these two old companies to be divided as they saw fit—and their riparian interests having been adjusted, they saw fit. [Laughter.] The introduction of the Alexander bill resulted in Mr. Alexander's retirement and Mr. Smith's coming from Buffalo to Washington in his place, and you have before you a bill introduced in Congress by Mr. Smith at the present time to consider.

Mr. FOSTER. I always thought that Buffalo supposed Mr. Smith was a superior man to Mr. Alexander. [Laughter.]

The CHAIRMAN. You would not have us infer that the introduction of a bill by Mr. Smith will keep him home?

Mr. SCOVELL. I do not think it will keep him home. It will help some. The hearing on the so-called Alexander bill was fixed for the 6th of January of last year. I had previously seen our newly elected governor and on the same day as his message went to the legislature this resolution was introduced, and before they adjourned for the appointment of committees it was unanimously passed by both houses:

By SENATOR BURTON: That the clerk of the senate be directed to communicate with the proper committee of the house of representatives, through its chairman, and request that no final action be taken by its committee on the proposed bill now before it known as the Alexander electric power bill, until the New York State authorities have an opportunity to examine its provisions and to be heard thereon.

On January 4 that was adopted in the senate.

That was on the 4th day of January. On the 5th I obtained a certified copy of that resolution, and on the 6th I appeared before the committee on Rivers and Harbors, which was considering the Alexander bill, but deferred action as requested by the legislature at that hearing in relation to the constitution. Suffice it to say that the committee did not act at that time with respect to the Alexander bill, but deferred action as requested by the legislature of the State of New York.

Mr. FOSTER. Do you now favor the Smith bill?

Mr. SCOVELL. I won't say as to that as yet.

Mr. FOSTER. I thought not.

Mr. SCOVELL. On February 17 Gov. John A. Dix sent to the Legislature of the State of New York a communication with respect to both the Niagara Falls matter and the Long Soo. I had drafted a joint resolution to make that effective, and on February 20, three days later, the senate unanimously adopted the joint resolution in question. The following day, February 21, the same resolution was adopted by a vote of 82 to 47.

Mr. COOPER. That was in the other house—the assembly?

Mr. SCOVELL. In the assembly. It states so fully the position which the State of New York wished to take with respect to the Alexander bill, which disposed of the 4,400 cubic feet of water, that I believe your committee should understand the position of the legislature at that time with respect to that pending bill as an assistance to you with respect to the drafting of suitable legislation at this time.

By Senator BURTON: Whereas the Committee on Rivers and Harbors of the House of Representatives of the United States, in compliance with the request contained in a joint resolution adopted in Assembly of the State of New York, February 21, 1911, has deferred final action on the proposed bill before it known as the Alexander Electric Power bill, pending an examination into its provisions by the authorities of the State of New York, and

Whereas a communication has this day been received from His Excellency the Governor of the State of New York in the diversion of water from the Niagara River, which suggestions should be embodied in the form of amendments to the said bill,

*Resolved*, That the assembly agree that the legislators respectively request the representatives to use their best endeavors at the present session to effect the amendment of said bill.

First. Which are now actually producing power from the waters of said river or its tributaries be eliminated.

That was to prevent the restriction contained in the Alexander bill, whereby it gave it to those companies only. In other words, to use the words of my friend, Mr. Brown, the legislature desired that the act of Congress should be more elastic. [Laughter.]

Second. So that any permits hereafter granted for the diversion of water from the said river or its tributaries in addition to this—15,000 already recognized or issued—shall be granted and issued by the governor, having in mind especially such individuals, companies, and corporations as shall be able to satisfy him of ability to develop the maximum quantity of electrical power from such limited additional diversion of water.

If you will allow me to divert right there, we all know Mr. ———, of the State senate, and when he was advocating that provision he said:

There is only one argument against that provision, and that is ready money, cash in hand.

And when they voted on it they got unanimous action as a necessary result.

And that such permits shall be issued for such limited periods of time and upon such compensation to the State of New York as shall be reasonable and just.

That second paragraph announces the policy of the State of New York with respect to those additional 4,400 cubic feet.

Third. So that the limitation contained in this act, entitled "An act for the control and regulation of the waters of the Niagara River"—that is, the Burton bill—where by not to exceed ——— was permitted to be granted to any one individual or corporation, shall be restricted in said bill and continued in effect thereunder.

The limitation which allowed only —— cubic feet of water to go to the Niagara Falls Power Co., developed under only 136 feet of head, was taken out of the Alexander bill, and the State of New York says: "We want that put back in, because otherwise a company might get some additional water which would not be used under the most effective head."

Fourth. So that no privilege arising under any permit heretofore or hereafter granted shall be without the approval of the Secretary of War, and no such approval shall be given until consent thereto by the State of New York shall have first been obtained.

The object of that provision was to prevent the possibility of a monopoly by dealing in permits.

Fifth. So that no electric power produced by hydraulic power used under any permit granted under this bill shall be transmitted to any point without the State of New York, except with the consent of said State.

Sixth. So that the granting of permits shall not be deemed to be required to cover the use of the surplus water of the Erie Canal for hydraulic power purposes, but the disposition of such waters shall be and remain under the sole jurisdiction of the State of New York.

That is due to the fact that at the city of Lockport the Secretary of War has issued a permit for the taking of 500 cubic feet of water, which is drawn from the Niagara River, to Lockport through the Erie Canal. It is Erie Canal water which by the terms of the treaty is not subject to its provisions. It is used at Lockport between the upper level of the locks and the lower lever of the locks, and the State of New York believes that that 500 cubic feet of water should not be included in the limitation of 20,000 cubic feet per second, or in the minimum limitation of 4,400 cubic feet per second, but that there should be 4,900 cubic feet per second available.

On the Canadian side of the Niagara River and connecting Lake Erie with Lake Ontario is the so-called Welland Canal, which on two different occasions since its original construction has been changed in its line of route, passing through the old city of St. Catharines, another through Merritton, and another through Thorold. The waters are taken from Lake Erie, except such as are needed for navigation, and to that extent depletes the flow through Niagara River, but you will notice that in the wording of the treaty no reference is made to the diversion of water from Lake Erie. It is only diversion of water from Niagara River.

Along the line of the old canal 1,000 cubic feet of water is used for power purposes. At —— Falls one of the finest little electric powers in Canada is installed. At the several levels of the old canals the water is used for the generation of power to light the city of St. Catharines, to run the carbide plant—I do not see the gentleman here who spoke yesterday for the Union Carbide Co.—but to furnish the electricity for Mr. Thomas L. Wilson's carbide plant in Canada. Mr. Wilson has a plant at Merritton, and he uses two levels of the Welland Canal power for the generation of electric power for his use. The State of New York feels that it is quite as much entitled to surplus canal waters as the Province of Ontario or the Dominion of Canada, and it has taken the position that in dealing with this matter Congress should recognize the right of the State to dominate its own canal and its own surplus waters. You therefore have in that joint resolution the substance of the position taken

by the legislature of the State of New York as recently as February last.

Mr. SHARP. Are you going, in the course of your remarks later on to suggest something—

Mr. SCOVELL. Yes; unless you ask me to stop before that.

Mr. SHARP. I was going to ask you to do it now, if you were not going to do it later.

Mr. COOPER. You were going to say something also about the relative costs.

Mr. SCOVELL. Congressman Alexander telegraphed me on Washington's Birthday, the day after the adoption of this joint resolution, that it was then too late in the session to accomplish anything. I came to Washington and had a conference with him. I brought a letter to Senator Burton from the governor, had a conference with Mr. Root, placed in his hands the bill which would embody the amendments suggested by the legislature of the State of New York, conferred with the Congressman from my own district here, and found that the opinion of all was that it was too late to do anything to extend the Burton bill. I felt that it was desirable that something be done if we could, and I saw the ranking Democratic member of the Rivers and Harbors Committee, Mr. Sparkman, of Florida, and he arranged for me to meet the President. Of course, Mr. Taft, as Secretary of War, originally granted the several permits under the Burton act which are in existence. He held hearings at Niagara Falls and is absolutely the most familiar with the situation of any one of the officials in the executive department of the Government. So that in going to him in regard to the matter I knew that what I had to say would be fully understood and appreciated at once, and as the result of my conference with him he made an appointment for Senator Root, Senator Burton, and Mr. Alexander to meet me at the President's office on the following Monday. That day the attitude of Senator Burton in favor of preserving the scenic beauty by holding us down to 15,600 cubic feet of water per second on the American side and not allowing power to be imported from Canada was still the block in the way, and we finally agreed to adjourn until 5 o'clock when we would submit in writing statements to each other as to what we wanted.

Mr. SHARP. What were Mr. Burton's reasons for opposing the importation of power?

Mr. SCOVELL. That it was a method which should be taken by the United States to prevent Canada from proceeding with further development of power on the Canadian side and thereby further depleting the flow of water over the Falls.

Mr. GARNER. On the theory that Canada could not use its own power?

Mr. SCOVELL. On the theory that Canada could not use its own power at home, and that if we kept it from coming over here we would continue to save the beauty of the falls for a short time anyway. The Senator from New York realized that we were so close to adjournment it was necessary to act promptly, and when I went to his office at half past 2 I found he had already drafted his ideas in the form of an amendment to the sundry civil bill and had introduced it, so it might lie on the table for 24 hours and pass to the conference with the other bills.

His amendment provided that no such permit shall be granted allowing diversions of water exceeding 15,600 cubic feet a second without being sent to the joint commission provided for by such treaty. I met him in the Vice President's room, and I said to him, "In the first place, the joint high commission is composed of Canadians as well as Americans, and the treaty has already determined that we are entitled to 20,000 cubic feet, so the Canadians should not have anything to say about the division of any part of that 20,000 cubic feet. It should be the American members of that joint high commission." He said, "I recognize that that is better." I said further, "It should read, 'without the consent of the State of New York and the American members of the joint high commission.'" He said, "That is the best politics and the best law that has been suggested since this matter started." He saw the members of the conference committee, and I personally went to Mr. Sulzer and Mr. Driscoll and arranged through them so that I met Mr. Tawney and Mr. Fitzgerald, of Brooklyn, with the result that it was finally agreed that the sundry civil bill as reported out should contain this specific provision. The question of amendment came up in the Senate, as you know, the Burton interests controlled and there was nothing done at the special session which followed before the expiration of the Burton law in June. Mr. Root introduced a bill in the Senate and Mr. Simmons in the House, Mr. Simmons's bill being now before you, containing the exact words of the suggestion made. It reads now:

No such permit shall be granted allowing diversions of water exceeding in the aggregate 15,600 cubic feet per second without the consent of the State of New York and of the commissioners on the part of the United States in the international joint commission provided for by such treaty.

That is the bill, one of the two bills, which you now have before you. The other bill is the Smith bill, which was also introduced at the special session, but neither was allowed to go through because you were considering special matters at that session.

The CHAIRMAN. Which of the two bills, the Smith bill or the Simmons bill, do you prefer?

Mr. SCOVELL. I am going to dissect both of them, and ask you to develop a bill of your own. [Laughter.]

The CHAIRMAN. I suppose that is what the committee will have to do.

Mr. SCOVELL. The attitude of the executive of the State of New York has been communicated by him to both of the Senators in this letter:

STATE OF NEW YORK,  
EXECUTIVE CHAMBER,  
ALBANY, N. Y.

To Hon. ELIHU ROOT and Hon. JAMES A. O'GORMAN.

GENTLEMEN: Permit me to call your attention to the importance of preserving the control of the State of New York over the waters of the Niagara River, authorized to be appropriated by the treaty between the United States and Great Britain on the boundary waters between the United States and Canada, proclaimed May 13, 1910.

The Government of the United States as such controls the navigable streams \* \* \* by the Federal Constitution; namely, for navigation purposes. It is the contention of the State of New York that when the Federal Government has authorized the diversion of waters from a navigable stream for any purposes other than navigation its power ceases, except \* \* \* recalling the authorization and determining that the authorized diversion is not exceeded. The determination of whether any part of the amount authorized by the Federal



Government shall be diverted and to whom rests with the State of New York. The State of New York is the owner of the bed of the stream and in the control of its riparian waters generally, but is the owner in fact of special rights of riparian control in the Niagara River procuring to it \* \* \* ownership of the Niagara Park, including the islands. The State has heretofore made no grant for the use of these waters. It may also desire to make use of the waters permitted to be diverted, in some way not yet settled.

In view of these conditions I beg to request that you use your best endeavors to procure for the State, in any Federal legislation on this subject, a recognition of the principle that the State of New York shall have exclusive jurisdiction and control over the use and diversion, whether temporary or permanent, of all waters authorized to be diverted within the State by the treaty with Great Britain.

It is suggested for your convenience that this principle might be covered by a provision in the proposed law substantially to the following effect:

That such person or persons as shall be designated by the newly constituted authorities of the State of New York, and none others, shall receive the use and diversion of the waters authorized to be diverted by said treaty, subject as to the total amount diverted to the supervision and control of the Secretary of War.

The CHAIRMAN. Not exceeding the amount stipulated in the treaty?

Mr. SCOVELL. That is what he says, "subject as to the total amount diverted, to the supervision and control of the Secretary of War." [Reading:]

I shall, of course, be glad to exchange views with you on this matter at any time, and there are points cognate to this subject upon which I shall address you separately.

Very respectfully,

JOHN A. DIX.

The success which has been achieved in the Conservative Party in Ontario through its policy for the establishment of a hydraulic electric power commission and the distribution through the Province, mainly for the purpose of enabling small industries in small communities to be able to get cheap power and keep out of the large cities the laboring population and give them an opportunity to live in small communities, has worked so well that the State of New York, on the advice of the governor during the last session, devised a conservation commission for the State of New York with very broad and ample power. That commission, according to a letter that I have from its chairman to-day, will be represented before your body officially next week, on Tuesday, when you gather, as will also the State of New York, on this issue. The personnel is one, I am sure, to which you can intrust the matter of the division and diversion of this additional water. Whether the State will want to take it itself, develop it and transmit it, or whether it shall wish to give it to some corporation which can use it most effectively and then have that corporation transmit it and distribute it under regulations imposed by the conservation commission, is yet a matter to be determined in each individual case by that commission.

Mr. SHARP. Would he have it in his power to give that away to anybody else except these two companies?

Mr. SCOVELL. As against the riparian rights — that is a question which the State has under consideration. It follows that, as between the two, it is for its interest to give it to that corporation which can make it most efficient in any event. The Niagara Falls Power Co., by reason of having only 136 feet of head, can only

develop 110 horse power per cubic foot, whereas the hydraulic company, having 210 feet head, can develop approximately 218 horse power per cubic foot.

Mr. LINTHICUM. What horsepower would this additional water furnish?

Mr. SCOVELL. It is easily computed on the basis of 10 horsepower per cubic foot. For the Niagara Falls Co. on the basis of 44,000 horsepower—

Mr. DIFENDERFER. It would be 0.81 more, whatever that would be.

Mr. GALLAGHER. About 80,000.

Mr. SCOVELL. Just about 80,000, and if the State of New York saw fit to take the water from the upper river to below the next two pools, which are described so fully in the report of the War Department, it is possible to get a net head of 276 feet and get 24 horsepower per cubic foot, which would give in the neighborhood of 105,000 horsepower. Those are matters of policy and of legislation, of constitutional legislation on your part, or in the State of New York if you delegate these things to the State of New York.

Mr. DIFENDERFER. Mr. Scovell, the gentleman you referred to a while ago has just come in.

Mr. SCOVELL. I did not wish to ask a question. I merely said that the Thomas E. Wilson Co., which manufactures carbide in Canada, used two of the levels of the old canal for the generation of power. That was an assertion I made relative to the use of the Welland Canal for power.

Now, if we pass quickly to the bills themselves—

Mr. COOPER. You have not yet mentioned the difference in the cost—the price paid. You said you had some suggestions.

Mr. SCOVELL. I think the question of the price at which power should be sold should be left to the public service commission of the second district of the State of New York, or such public service commission as controls where the power is sold. The State of New York, acting through its public service commission, can determine those things for the benefit of the people of the State to better advantage, I think, than your committee or a special commission to be appointed.

Mr. LINTHICUM. What is Buffalo getting power at now?

Mr. SCOVELL. That varies according to whether you wish a very small amount or a large amount. I was president of a small industry in Buffalo which used 18 to 25 horsepower, and I used Niagara Falls power, and I found it was so expensive that I cut it out. It cost me \$3 a month per horsepower for half a day's service. I found I could install the natural gas engine and make it more economical, and so I did that. I sold my dynamo and put in a gas engine.

I might say in this connection as to the cost of power that Mr. ———, who built the Bethlehem Iron Works — than whom there is probably no greater mechanical authority — told me that the cost of producing power by steam was the smallest for continuous 24 hours' service at Birmingham in England, where it could be had at a cost of \$36.36 per horsepower per annum; and that the next cheapest cost was in one of the coal areas in the United States—in Pennsylvania—where it could be purchased for \$36.52.

Mr. COOPER. A year?

Mr. SCOVELL. Per annum for a 24-hour power. I may say in this connection as bearing upon the general scope of the situation, that the late Sir John ———, who was a member of the firm of Jay Cooke & Co., of Philadelphia, before his return to London, asked me to go before a committee of bankers who were considering some of the debentures for the second wheel pit of the Niagara Falls Power Co. and state to them whether I thought there would be a market for the power, and I quoted those figures which had been furnished me by Mr. ———. But I stated that the maximum price at that time being \$20 for continuous 24-hour service, no corporation desiring continuous 24-hour service and in which power was a large factor in the cost of production could afford to locate anywhere but at Niagara.

They then asked me what classes of corporations would want that. I told them I was neither a prophet nor the son of a prophet. When work began on the Niagara Falls tunnel, there was a boom. Throughout New England there was a population of five for every horsepower available, and it was expected that the development of Niagara would bring a population there of a million. The first company to want Niagara Falls power was the Pittsburg Reduction Co., which produced aluminum by electro-chemical processes, taking a large quantity of power, and it so happened that they expected to use such power as is purchased for lighting and running trolley cars. At the time of which I am speaking there were no corporations using Niagara Falls power. There were no processes used for the application of Niagara Falls power which had been patented when work began upon the tunnel and there were no products made from those processes known to science when work began upon the tunnel. Consequently I could not predict what classes would want the excess power which would be produced. You have heard how that demand for power by the electro-chemical companies is constantly increasing. The principal reason why the amount of water given to the Hydraulic Power Co. was increased at the time of the passage of the Burton bill was that, having got a permit for 6,500 horsepower, the aluminum company of America wanted such a large quantity of power they could enter into a contract forthwith and so enable them to ask for the allotment to them of more water. The Union Carbide Co. told us, "They are increased 10,000 a year, and yet we are not allowed to use the waters we are given by the treaty, nor are we allowed to import more power."

Mr. LINTHICUM. And the State receives no revenue from this whatever?

Mr. SCOVELL. No, sir. I happened to rent a small amount of power for a corporation of which I am treasurer from Gen. Greene's company. Within six months I have been asked whether or not it would be possible for three different corporations—one that wanted 5,000, another 6,000, and another 10,000 horsepower—to locate at Niagara. I said, "You can not get it on the American side. The only company that imports for you is Gen. Greene's company, and he is up to 57,000, which is within 3,000 of the limit, and until Congress makes provision so we can get more, or else permits us to use our own more fully there is no use coming to Niagara, except you located on the Canadian side."

Mr. SHARP. Do you think there is the probability of Americans going to Niagara and locating on the Canadian side?

Mr. SCOVELL. I do; and very quickly.

Mr. SHARP. I should imagine that should be controlled.

Mr. DIFENDERFER. For the reason that they can get power cheaper.

Mr. SCOVELL. So they can get it at all. There is no question at all of competition between the Niagara Falls Power Co. as against the Hydraulic Power Co. There is no difference in the rate at which they can afford to sell, because the demand for the power is so far in excess of what can be supplied.

Mr. DIFENDERFER. Have you heard any individual complaints as to the high price of power that is furnished?

Mr. SCOVELL. I have in Buffalo but not at the Falls. I attribute it in Buffalo to the necessity of taking off three profits, as I said awhile ago.

Mr. GARNER. With reference to your advice to the corporation in New York that it was impossible for them to get additional power on account of the 130,000 horsepower now in use, with the exception of 3,000, isn't there a company up there that has a permit for some 46,000 horsepower, which is not being used?

Mr. SCOVELL. They do not import any into the United States.

Mr. GARNER. If that permit was canceled, wouldn't you be able to get more power?

Mr. SCOVELL. That would depend upon Gen. Green's company's relation to the Ontario and Dominion Government as to the proportion of the power generated by his company which they would allow to be exported.

Mr. GARNER. But if this permit was canceled, some other company could take it up and bring it in?

Mr. SCOVELL. Quite true.

Mr. LINTHICUM. Would you mind filing here a list of prices in Buffalo where these companies are operating?

Mr. SCOVELL. I believe the mayor of Buffalo has recently asked for an appropriation of \$35,000 in order to get such data. While I might pose as a philanthropist, I could hardly do that.

Mr. BARTON. The schedules are printed and open to the public. Anyone can get them.

Mr. LINTHICUM. Will you file such schedules?

Mr. BARTON. Yes, sir.

Mr. CURLEY. Is there any way we could get the same prices in Canada?

Mr. SCOVELL. The schedule would refer to prices for power furnished by the hydroelectric power commission.

Mr. CURLEY. Is there any limit on the prices charged by the power companies?

Mr. SCOVELL. The only way in which that can be done, so far as I know, is by State regulation of prices at the time of granting permits to them to take water. Otherwise the law of supply and demand will control, and the demand is so great in the United States that even if the doors were open for the importation from Canada of all that Canada can produce, there would still be no competition because of the demand. It would be a matter of competition as between power produced by coal as against power produced by water.

Mr. COOPER. Mr. Scovell, in view of what you just said of the mayor having asked for an appropriation of \$35,000 to get at the prices, and the statement of the gentleman to the right that that will be given by him gratuitously without it costing anybody a cent, I move to inquire if there was some reason for the mayor asking for \$35,000 to get what would be given to him for nothing?

Mr. SCOVELL. The question of what people pay for power and what the schedules are are very different things, you know. The effort on the part of the mayor is to determine whether or not these prices could be lessened to the mutual advantage of the people and the company.

Mr. COOPER. Have there been complaints of a serious character there as to discrimination as between consumers?

Mr. SCOVELL. I could not say as to that, but I think the complaint has been largely an undertone on the part of the users. We are glad to get the power because it is cheaper, but we are not the electric city that we thought we were going to be. That is all, so far as that is concerned. The company which I formerly represented, the former mayor of Buffalo asked its controlling interests as to whether or not if they got the right to develop power at the Devils Hole, where they could produce 24 horsepower per cubic foot of water, they could bring power to Buffalo; and if so, at what price. The party in question stated to the mayor of Buffalo that they would be glad to contract to deliver at the city limits of Buffalo 25,000 horsepower at \$15 per horsepower.

Mr. FOSTER. If I understand your position with reference to importing electricity, you do not think we should place any restrictions upon it?

Mr. SCOVELL. The provisions in the Smith bill with reference to placing restrictions on importations, I will omit entirely. If we have no use for it, they will probably cut it off and take it back. But we want as much as we can get and as soon as we can get it, and leave to the officials of the State of New York appointed for that purpose the question of its distribution to us and the prices fixed. And I can say that the commission of the State of New York have been in close touch with the hydraulic electric-power commission of Canada, know what they are doing there, know what prices can be obtained, and have the benefit of all the information that the Ontario government has in this matter, which it has gained from a practical undertaking of the distribution. There is no question as to the power of the State commission to undertake to carry out what is necessary to make this water most efficient to the people of the United States, whether imported from Canada or generated here.

Mr. SHARP. Then you would not quite agree with Mr. Brown's statement that there would be no right or authority to impose conditions under which we could import?

Mr. SCOVELL. I assume, upon the assertion of the gentleman from Detroit, when he answered very frankly a question a little while ago wherein he indicated there would be no desire on his part to do a certain thing, that there will be a desire on the part of the Niagara Falls Power Co. or the Hydraulic Power Co., through their attorneys, to test the common law of riparian rights with respect to the water as between the State and any person to whom the State may grant it.

Mr. BROWN. As a lawyer, don't you generally take the same position under the general principles of law?

Mr. SCOVELL. I do, on the common-law basis; but I do believe that the common law is subject to change by statutory law, and in this case not only is it changed by statutory law, but we have gone one step further on this change and the relative rights have been placed by a treaty which is the supreme law of the land and which can entrench upon the Constitution.

Mr. BROWN. Speaking now of the question of importations, as the treaty does not prohibit importations, don't you think the use of the power should be unrestricted, both from a legal standpoint and from the standpoint of policy?

Mr. SCOVELL. You were thinking about imported power?

Mr. BROWN. Solely.

Mr. SCOVELL. I was speaking before as to riparian rights. Let me understand your question as to imported power.

Mr. SHARP. I asked the question. I referred to the imported product, and I was asking if you agreed with the statement of Mr. Brown that we have no right to impose conditions of different kinds, whether it be price or quantity, upon the importation of the power?

Mr. SCOVELL. As far as that is concerned, I believe that you have that right as to what is imported, to determine the terms.

Mr. FOSTER. To restrict it, you mean; to prevent its being imported at all?

Mr. SCOVELL. No; you can not prevent, I think.

Mr. FOSTER. We have the right to regulate it?

Mr. SCOVELL. We have the right to regulate it.

Mr. SHARP. And impose conditions?

Mr. SCOVELL. Yes. The question is whether you shall keep that to yourselves or whether you will give it to a commission such as was suggested yesterday by Mr. Doremus. He introduced a bill yesterday for the establishment of a commission in the United States which should govern prices at which power should be sold.

Mr. FOSTER. I have not talked with him, but I suppose he believes we have the right to prevent its importation, and that, therefore, he is in favor of it because in that way he hopes to preserve the scenic effects.

Mr. SCOVELL. I believe he thinks we have that right.

Mr. FOSTER. Do you agree with him on that?

Mr. SCOVELL. I can not judge that as a lawyer very well. I had to do with the question of importation of natural gas and whether it is subject to duty. As far as the United States is concerned, it was determined that we had the right to import natural gas and that it was not subject to duty.

Mr. COOPER. By whom was it determined?

Mr. SCOVELL. I believe by the highest courts of this country. As far as the courts of the State of New York are concerned, they have decided that the water of Niagara River, although the State owns the bed of the stream, is flow water and is like air, or light, or the heat of the sun; that it is public and belongs to him who first impounds it.

Mr. BROWN. You mean to say that that is the law of the State of New York?

Mr. SCOVELL. Yes, sir.

Mr. BROWN. I disagree with you, and the courts of New York disagree with you.

Mr. GARNER. May I ask you a question? I want to get at what your views are with reference to two or three propositions involved in this.

Mr. SCOVELL. Just a moment. The reason I said that is this: The question as to the right of these several corporations to take water from the river—it has been determined by the courts that this is not a grant of water, but is a grant of permits. Otherwise they would all be unconstitutional, null and void, because they were not passed, two-thirds being present.

Mr. FOSTER. I was referring to the treaty. We have made the treaty. I am not expressing my views about it. We have a treaty by which we are permitted to take so much water and Canada is permitted to take so much water for the development of power. Now, the question that arises in my mind is where we get our right to say what Canada shall do with the power.

Mr. SCOVELL. You have no right whatever to say what Canada shall do with her power. She can restrict its being sent to the United States if she wishes that.

Mr. FOSTER. Yes; but if she wants to send it to the United States, can we restrict it?

Mr. SCOVELL. I should think not.

Mr. BROWN. I agree with you there.

Mr. SCOVELL. I think the Burton law is a bad law, but we never expected it would be continued along indefinitely. We abided by it without testing it because we never expected it would run for six years.

Mr. SHARP. Do you think we would be compelled to accept a power or current sent from there over here?

Mr. SCOVELL. The distribution and sale of it to the citizens of the States rests upon the law of that State; and if there is a commission that determines those things, it will be determined by that commission.

Mr. FOSTER. If it is once sent over here, then it will be subject to such regulations?

Mr. SHARP. Oh, yes; it would only be an academic discussion as to whether they had a right to send it over here.

Mr. SCOVELL. If we put in a provision that they could not send it over here except as they sold it at \$4 a horsepower, then the question would be academic.

Mr. COOPER. Do you say the United States can not pass a law prohibiting the importation of electric power from a foreign country?

Mr. SCOVELL. That is my impression.

Mr. COOPER. Is it any more than a very vague impression? Is not this United States Government absolutely supreme beyond the power of any Government on earth to force a thing inside the boundary without its consent?

Mr. FOSTER. Oh, yes. But what provision in the United States Constitution prevents me from importing electricity if I want to?

Mr. SHARP. The United States Government can prohibit you from buying broadcloth from a foreign country. The right over commerce with foreign countries is absolute, without any sort of qualification whatever, and the Government can prohibit it as it did at the time of the embargo law. There is not any doubt about it in my

mind. It can stop the importation of dry goods, and why can not we stop them from forcing power in here?

Mr. SCOVELL. We can not stop them from sending wireless messages. I have talked between New York and Toronto without wires.

Mr. COOPER. That is not a parallel case. I suppose you could have a man standing on each side of the boundary line, and one of them by signs threaten to lick the other man. I am talking about a subject which involves the putting up of conduits and wires for carrying power—

Mr. BROWN. May I make one suggestion? If the Government has power to prohibit importation directly by a straight unqualified prohibition, or indirectly by restrictive terms, must not that be enforceable as to all acts, persons, and places? Can the Government make a restriction, as I said yesterday, that is not general?

Mr. SCOVELL. The whole international boundary is under purview in this.

Mr. COOPER. That the Government of the United States can pass a law prohibiting the importation of electric power from a foreign country, I should say, would be in law absolutely incapable of contradiction.

Mr. BROWN. Even the Burton law does not attempt that.

Mr. COOPER. Now, Mr. Scovell, don't you think that the United States can by statute prohibit the importation of power?

Mr. SCOVELL. I have not looked that up, but I think perhaps it can. The Burton law is not such a law—

Mr. COOPER. The question was asked, without regard to a particular locality, as to whether the United States Government could stop the importation of electric power, and you gave it as your impression that we could not do it. If it can not the United States Government is not supreme.

Mr. SCOVELL. I understand that in any question of importation or exportation the United States would be supreme.

Mr. COOPER. Absolutely without qualification. The embargo law passed a century ago shows that.

Mr. FOSTER. The embargo law did not last long.

Mr. COOPER. It lasted long enough to show that Congress could pass a law which absolutely prohibited the importation of anything from certain countries.

Mr. GARNER. Now, I want to get down to some more practical ideas, or rather get your ideas of what ought to go into this bill. Let me see if I can get your position as to what ought to be done. You want, in the first place, the 4,400 feet to come in?

Mr. SCOVELL. To be made available.

Mr. GARNER. You want the full capacity of the 20,000 feet to be utilized by this Government?

Mr. SCOVELL. I want it utilized on this side.

Mr. GARNER. Of course, if it is utilized at all, it will be utilized on this side. In addition to that, you think New York ought to have the right to control this power when it is utilized?

Mr. SCOVELL. I do, not only with respect to the 4,400, but the whole.

Mr. GARNER. The entire 20,000; that is what I believe I said. In addition you believe New York ought to be permitted to utilize and control 500 additional cubic feet?



Mr. SCOVELL. It does not make any difference how much it is—the surplus waters of the Erie canal.

Mr. GARNER. Then you believe that the power should be permitted to come into this county, as much as possible from Canada, and that the control and regulation of that power should be left to New York?

Mr. SCOVELL. I do.

Mr. GARNER. With those provisions in a bill, it would nearly perfect the treaty?

Mr. SCOVELL. Nearly.

Mr. GARNER. Now, what have you to say with reference to the desire of the State of Michigan to receive some of this power?

Mr. SCOVELL. They would not take any of the United States power. They are simply asking for some of the Canadian power.

Mr. GARNER. They ask for the importation of it. Do you mean we should put the entire importation of power into the hands of the commission of New York?

Mr. SCOVELL. I do not. Simply give it to the control of the State into which it passes. It would not make any difference if it was in Minnesota, or Michigan, or down at Ogdensburg where they take the power from the St. Lawrence.

Mr. GARNER. Whatever State it may be imported into, the laws of that State should control the power after it reaches the State?

Mr. SCOVELL. Yes, sir.

Mr. GARNER. Well, I don't know but what I agree with you.

Mr. SCOVELL. The question that comes to my mind as the result of the thought I have given to it, if during the year since we originally planned the changes in the Root bill which are embodied in the Simmons bill before you, seem to have resulted in my reaching the conclusion that it is undesirable that any more strings be tied around the use of the 4,400 cubic feet such as would be the result of requiring the consent of the American members of the joint high commission; and I am ready to say that whereas then we had no conservation commission in the State of New York, and whereas now we have newly constituted authorities in the form of a conservation commission, that it would be sufficient to provide that the permits should be issued by the Secretary of War on the recommendation or with the consent of the conservation commission of the State of New York, and on such terms and subject to such regulations as they should impose, the same to be true as to other States along the boundary where importation may occur.

Mr. GARNER. But your broad proposition is this: That as far as the Federal Government could go is to see that not more than 20,000 cubic feet per second is taken out on this side, and that should be left to the Secretary of War; that that far we should go and no farther, leaving the rest of the details and regulations to the States that take this power?

Mr. SCOVELL. Exactly, whether imported or generated in this country.

Mr. HARRISON. Suppose we should pass such a law as this, giving States power to regulate rates, and they should pass laws ordering a certain rate to be charged and the companies should enjoin the enforcement of that right on the theory that we had authority here, that it was a Federal proposition, do you think that would avail them anything?

Mr. SCOVELL. I do not.

The CHAIRMAN. Have you concluded?

Mr. SCOVELL. I have.

#### STATEMENT OF MR. ALBERT F. EELLS.

Mr. CHAIRMAN. Will you give the reporter your name and whom you represent?

Mr. EELLS. My name is Albert F. Eells; I represent no one but myself.

Gentlemen, I have but a crude outline of my plan, as when I received notice of this meeting I was gathering facts bearing on this subject and am unprepared in many details. What I propose to do is this: To build a power house below the cliffs at Niagara Falls, which will be constructed with a granite front and over the roof of which will pass the waters of Niagara River. Then the water will fall over the front of the structure and be equally distributed over the entire front, hiding it entirely from view. The crest or front of this building can be formed to produce any effect on the falling water desired. The cliff now there could be copied if desired. The crest could also be raised to any desired height. This falling water can be utilized at the base of the power house to operate wheels made especially for that purpose, which can be connected with generators for generating electricity. These wheels are also invisible from the outside, as is also the entire structure. A gallery may also be made in such a manner that visitors can pass safely under the entire waterfall.

To accomplish this object it will be necessary to divert the water from the part of the Falls where the workmen are operating, and for this purpose I shall require an international permit; also a permit to remove the loose stone now laying at the bottom of the Falls, and possibly a permit to lower the river below the Falls by removing some obstructions down the gorge, and, as the scenic beauty of the Falls will be augmented and the Falls preserved from disintegration, after finishing this work, I think I should be paid a specified price for doing this work. This is the situation at present at the Horseshoe Falls: The water is eating up into the cliff at the rate of between 5 and 6 feet a year. In a few years we shall see nothing of the Canadian Falls excepting a gorge with some fog at the mouth of it. By this plan the scenic beauty of the Falls will be augmented, the water level in the river will be slightly raised, the water passing over the Falls will be utilized for a power, and the people will be receiving a benefit of a great electrical power; also employment in the construction and operating.

Gentlemen, this is a blue print which I got down at the engineers' office and which I suppose is the largest of the Niagara Falls and the Horseshoe. Being a little dim to look at from a distance I had a tracing made which shows it so that the whole committee can see. This [exhibiting drawing] represents the Horseshoe. This is the 1875 line. The upper edge of the black line is where the Horseshoe is at the present time. It is gradually eating up into the stone at the rate of between 5 and 6 feet a year, and that in a short time is going to make a gorge up in here and the only thing we shall see of Niagara Falls will be a gorge and a little steam at the mouth of it.

I have means of preventing this. You see this red line [indicating]. I propose to put a granite wall in there for the water to flow over, which can be made perfectly level and distribute the water all over the surface of the Falls. Behind this wall I would put a power house. For the foundation of that power house stone would be dumped in until it got up to a level with the water or higher. On that would be put pillars, on which would be put a roof, and over that roof would flow the water. This wall can be made to take any form necessary, and we could have any effect of waterfall desired. Now this water after passing over the falls would entirely cover this line [indicating], which would be the front of the fall. At the lower part of this power house I have wheels which would be operated by the falling water to generate electricity, and instead of having a famine of electricity we would have a very large amount of it to use.

Now, how I am interested in the matter is this: I have a patent for using a deflecting front for a waterfall; that is, for putting a power house behind a wall. To do this it will be necessary for me to divert the water from the Horseshoe and from other parts of the falls, and to do that it will be necessary to get an international permit for the work. So I come before you people to find out what your feeling would be in this matter. Of course, if you are opposed to it that ends the matter.

The CHAIRMAN. Isn't that a different proposition from the one we are considering?

Mr. EELLS. I do not know.

The CHAIRMAN. It has no relation to it, Mr. Eells, has it?

Mr. EELLS. It has nothing to do with that treaty; no, sir.

Mr. COOPER. How fast did you say the water was eating back?

Mr. EELLS. Between 5 and 6 feet a year, according to measurements. You can see it here on the blue prints.

Mr. FOSTER. Do you know how much it would cost?

Mr. EELLS. I have not got the details yet. I want to say if this should be favorably received by the committee it is going to be an expensive matter. Of course, I wish to get the ideas that would be brought out before this committee and I would like to get their idea as to whether they will look upon this favorably or unfavorably. It is going to be an expensive matter to get these details of the cost and, of course, I do not wish to spend the money myself unless this would be received favorably. Of course, if the gentlemen here feel unfavorable we will drop this matter right where it is.

Mr. FOSTER. It seems to me we would have to get a new treaty.

Mr. EELLS. I do not see what it has to do with the treaty. This is unseen altogether. This is all behind the Falls. None of my works are in view.

Mr. FOSTER. I mean with regard to building that wall.

Mr. EELLS. I do not ask you to spend the money. I will supply the money; I or my associates.

Mr. HARRISON. How will you be reimbursed for your expenditures?

Mr. EELLS. By the electric power. It will be something like 2,000,000 horsepower. We propose to use it all; that is, when it is wanted. It would not affect the water below the Falls.

The CHAIRMAN. Have you made application to the commission in Canada?

Mr. ELLIS. I have been over to Canada and they seem very enthusiastic. You see, they charge so much per horsepower for the water which is used, and they see an opportunity of getting more revenue.

The CHAIRMAN. They have most of the Falls. Don't you think it would be a good idea to get their permission first?

Mr. FOSTER. I think you will find us just as enthusiastic as Canada, but I think, perhaps, as the chairman has suggested, that Canada should take the lead. Canada turned us down on reciprocity you know.

The CHAIRMAN. We will hear Mr. Watrous, the secretary of the American Civic Association.

**STATEMENT OF RICHARD B. WATROUS, SECRETARY, AMERICAN CIVIC ASSOCIATION, WASHINGTON, D. C.**

The CHAIRMAN. Mr. Watrous, will you give the reporter your name and whom you represent?

Mr. WATROUS. Richard B. Watrous, representing the American Civic Association, of which I am secretary.

Mr. Chairman, in taking some time at this late hour of the day. I want to say that we had hoped very much that the president of the association might be here this week, for he has been before similar hearings and discussed this subject and is known as an authority upon the subjects we represent, particularly on all matters concerning Niagara Falls—Mr. J. Horace McFarland. At this time I desire to say that he will probably be here next Tuesday, and we shall need, and I presume we can have, additional time to present the case as we see it.

The CHAIRMAN. We shall be glad to hear Mr. McFarland.

Mr. WATROUS. In my position, gentlemen, I am reminded somewhat of a certain meeting where a revival had been in progress for some time and the minister had asked all those who wanted to go to heaven to stand. The entire congregation arose. He had just propounded the question whether there was anyone who wanted to go to the other place when a wayfarer walked in, followed an uneven course down to the front where he stood unsteadily. The minister said, "Are you the only one that wants to go to hell?" He replied, "Well, parson, you seem to be all alone, so I am willing to go with you." I have had a feeling in the presence of this august audience composed of president, attorneys, and engineer experts of the power companies, that I was almost alone. But I am not alone, Mr. Chairman, because I have back of me the hundreds of thousands and millions of people of this country who believe that scenic glories such as Niagara Falls are things that have more than a commercial asset.

In this connection, may I be permitted to say just a little about the American Civic Association, which has been somewhat maligned in one or two cities represented here to-day, because it has spoken plainly concerning the falls. It is composed of thousands of representative men and women of this country, including some hundreds of affiliated societies which represent hundreds of thousands of individuals. There is numbered among the members of this association the President of the United States, who joined voluntarily when he was Secretary of War. There are other members in the Cabinet.

There are influential men and women of all the States. They have been heard from on several former occasions when this matter was to be fought out. You, as Congressmen, and the gentlemen in the Senate, know that you have heard from them in letters and in telegrams, and they have come from every section of the country. The association represents the consolidation of State and interstate societies organized for specific purposes which are mentioned in the circular which I hold in my hand. I am going to read from that the objects of the association, so that you may know what they are:

The cultivation of higher ideals of civic life and beauty in America, and the promotion of city, town, and neighborhood improvement, the cultivation and development of landscape, and the advancement of outdoor art.

I am going to ask the chairman for permission to hand that to the reporter to be included in the report of this hearing.

The circular referred to is appended, marked "A."

I am very glad to be an officer of that association. I also want to state that I am very glad to have had some years of contact with a distinctly business organization, so that I appreciate the value of business organizations—I mean aggregations of capital—and the important service they render to the country. I have never been considered as one who is out continually with a hammer against such organizations. I desire to say—and I know I speak the sentiment of the president of the organization—that it is not because of ill-feeling toward the power companies that we have contended for the preservation of the falls, but for the larger devotion to the people of this country and of the world who appreciate the beauty of a scenic wonder such as Niagara Falls. I have felt this afternoon that we have gotten away from the thought of scenic beauty. We can not forget that all these hearings and the hearings before the Committee on Rivers and Harbors and a large part of the hearings which resulted in the treaty are due exclusively to the idea that Niagara is a scenic wonder and ought to be preserved as such. Different phases of the question have been presented at length by attorneys and by engineers, but I believe I am the first one so far to speak of the value of the Falls as an asset to all the people from the standpoint of its scenic glory.

I do not want to try to discuss or enter into an argument as to the statement made yesterday concerning the vested rights of the power companies. I am reminded, however, that possibly there is a prior right to the falls, prior to those acquired by the companies there, as possibly illustrated by the photographs we have submitted of pictures made more than 100 years ago—a right of the people to the beauty of the Falls, a right which existed and was used long before we thought of using the water as a source of power.

THE CHAIRMAN. Have you any official records of the erosion of the Falls?

MR. WATROUS. I have not.

THE CHAIRMAN. Could you get that?

MR. SPENCER. I can get a statement of that and give it to you when I come to speak.

THE CHAIRMAN. We would like to have that go in the record.

MR. WATROUS. Mr. Spencer, who has just spoken, is a recognized authority on the Falls. My bible, however, is the reports, or reports combined into one, of the War Department, particularly of the Corps of Engineers.

Mr. FOSTER. Would it interrupt you to ask a question right there? I think I should understand what you are saying a good deal better if I knew what you want to have us to do. Apparently the two Governments have adopted a policy with reference to using a certain amount of water there and have entered into a treaty regarding it. Now, if you could tell us in a word just what you want to have us do, then I could adapt what you have to say to that statement and go along a little more intelligently.

Mr. WATROUS. I can tell you, I think, in a few words. I am only going to impose upon you for just a few minutes longer. I want to dwell just a moment on this matter of recognition of scenic beauty as a material asset, and I am going to submit here, to be filed and recorded, a decision in the circuit court of the United States rendered within the past year or two in Colorado concerning a case between The Cascade Town Co. and The Empire Water & Power Co.

The opinion referred to is appended, marked "B."

Mr. FLOOD. Mr. Foster did not desire to cut you off. His idea was for you to state what you proposed that we should do with reference to this 4,400 cubic feet of water and importing any more water.

Mr. WATROUS. I should be very glad to state that.

Mr. COOPER. Perhaps Mr. Watrous has his remarks arranged and desires to put them in in logical order to make them as effective as possible.

Mr. WATROUS. Briefly, Mr. Chairman, we stand just where we have been standing since we took up the consideration of the preservation of Niagara Falls. We stand for the limitations as prescribed by the Burton bill, both as to diversion on the American side, namely, 15,600 cubic feet per second, and the importation of power from Canada, namely, 160,000 horsepower. Our stand is confirmed by the latest reports which have been issued from the War Department, concerning which I shall have something to say.

I am going to ask that I may return to the introductory part of my remarks and say that the American Civic Association, in this striving for a preservation of the falls, has had the approval and cooperation not only of individuals but of many of the very representative business organizations of the country, and I want to submit for record a telegram which was sent on the 17th of last February by The Merchants' Association of New York urging in strong terms that the provisions of the Burton bill be extended.

The telegram referred to is appended, marked "C."

With regard to the desire of the city of Detroit to import cheap power, I want to submit to you a letter quoting letters that were sent to Senator Burton and to members of the Senate committee by Mr. J. L. Hudson, of that city, the proprietor of the largest retail store in the city, director of several banks, and a vice president of the board of commerce of that city.

The letter referred to is appended, marked "D."

I should also like to submit a very strong editorial from the Detroit Times of July 3, 1911, entitled, "Every pound of power from Niagara is a pound added to the people's load."

The editorial referred to is appended, marked "E."

Right here let me say that the power companies themselves may thank the American Civic Association for having been very zealous to secure

the reenactment of the terms of the Burton bill. For some reason or other it seemed to have been overlooked that with the expiration of that bill there would be no license for the use of water or importation of power. At the time I appeared before you, in June, I submitted, as the best evidence of that action, a letter, written on the 27th of June by the Secretary of War to the Speaker of the House of Representatives, stating the exact situation and telling what would happen with the expiration of the bill. I submit that letter again.

The letter referred to is appended, marked "F."

I believe that all of us are agreed that legislative action is necessary. I certainly am convinced—because I know of its efficiency and because I have a natural affection for the Army—that the War Department should be the department to have control, but there can be no difference of opinion as to the necessity for such action. As I said, my Bible, so far as figures and recommendations concerning the diversions of water are concerned, must be the reports of the Board of Army Engineers. We have had presented to us in printed form within the past week or two Senate Document No. 105, which contains the report of a distinguished Army engineer, Maj. Keller, which was completed, I believe, in the fall of 1908. I at times confess to a doubt, Mr. Chairman, that that report, which undoubtedly was called for for the express use of the commission in preparing the treaty, was ever brought to the attention of that commission. For some reason or other its publication has been delayed for more than two years, and we who have been following that question have not had the benefit of the observations and conclusions of the Army engineers.

Mr. BROWN. It is a fact that the commission had the use of all those things?

Mr. WATROUS. They should have had them, but some of us who made a zealous hunt for this particular report could not find them. It has been laid away somewhere for some reason which I can not understand.

Mr. COOPER. Gen. Bixby said that that was given by the Secretary of War to the President on the 19th of last August, and published on the 29th or the 31st. At any rate, it was handed by the Secretary of War to the President two days before it was published, and two years and seven months after it was made.

Mr. WATROUS. I should say that, in the letter of the Secretary of War, it is stated that, for executive purposes, its publication was withheld, and I can understand that in negotiating a treaty there are things that must be held confidential. I am impressed with the statements made by this Army engineer and his recommendations. I want to read again, as was read the other day by Mr. Cooper, the conclusion of this Army officer's report, to whom was assigned specifically the consideration of this question from the standpoint of scenic beauty. He says:

Accordingly, I earnestly recommend that (unless the remedial works just suggested be built) the minimum limits of diversion authorized on the American side, namely, 15,100 cubic feet per second, be reenacted, and that no greater amount of energy be permitted to be imported into the United States from Canada than 160,000 horsepower.

Mr. FLOOD. What is that you are reading?

Mr. WATROUS. Page 15, of Senate Document 105, given to us a week ago. Those are specific recommendations making allowance for a plan proposed by an assistant engineer who suggested a submerged dam at some point in the Niagara River which might have the effect of spreading the water. That I am not prepared to consider; it is one of those problematical things. However, that report is very definite and yet notwithstanding that fact, the treaty allows an increase of 4,400 cubic feet and has not set any limitations as to the importation. Bear in mind, however, that the treaty says there "may be" a diversion of 20,000 cubic feet; it is not mandatory, and it is evidently left to Congress to decide what it shall be. It should be borne in mind also that as has been shown in the reports or statements made during the past two or three days, that not all of the water that might be permitted to be used has been used and that the damage to the Falls which is mentioned as having been done was done as the result of taking not 15,000 cubic feet, but 13,000 cubic feet in round numbers. Therefore to extend the amount now by 4,400 cubic feet, we think, would be a very large increase.

Coupled with that is the very important presentation as to the waste that goes on with some of the companies, notably one company which is mentioned by name, where the waste is reported as 33½ per cent, to which I had the pleasure of calling your attention at your session on Tuesday—a waste of more than 2,500 cubic feet, which if transferred to water power, using the highest estimate, would mean something like 50,000 horsepower in round numbers. That shows that by a management which utilized what was given them there would be available a great increase of horsepower.

I had the pleasure yesterday of bringing out also, as I thought, the fact that there does not seem to be any very urgent need just now for increased importation when it is recalled that out of the 160,000 horsepower which might be used, but 110,000 has been used, or possibly 115,000. I am using the statement of Gen. Greene at the hearing a year ago for the 110,000. There is also a permit existing to a company which for some reason has never used it, and which it would seem to me might be transferred to some company that would use it, and it would take care of the request of Detroit for 25,000 horsepower and still leave 25,000 horsepower.

Now, it has been shown that most of the damage to the Falls on the Canadian side is due to the fact that much of the water that is drawn off on the American side comes from the Canadian side of the river. When the Burton bill was originally drawn it was, of course, realized that it was impossible to say to Canada what they could or could not divert, and we had to resort to a method of protection by indirection, and believing that Congress had power to act, that clause was incorporated in the Burton bill which provided for the limitation of the amount of power that could be imported, namely, 160,000 horsepower.

In the face of the very disastrous possibilities to the Falls, which we think existed at that time and which we still think exists, as shown by the reports of the Army engineers, we insist that the limitation should be kept up now and under the treaty. The statement has been made that if we do not allow our people to import up to the limit of the development over there, there is going to be a very large



Canadian development. That does not worry us greatly—and I think we are practical; I certainly want to be practical.

There is a principle at stake, and it is a principle which is coming to be recognized more and more. You gentlemen, as members of a committee of Congress, know that Congress is not legislating for Buffalo, or for Niagara, or for Detroit; you are legislating for the Nation. The Nation believes that in Niagara Falls it has a heritage which contributes to recreation, to pleasure, and to good health. The courts are coming to recognize, and we believe will recognize more and more as the years go by, the rights of the people to those things which contribute to recreation, and to pleasure, and to good health. The case which I have cited is a direct case, and under the jurisdiction of one of the United States courts. With this waste, showing what might be utilized, we are convinced that there is no practical need for increasing the amount on the American side. We are particularly impressed with the idea that because of the danger to the Falls on the Canadian side, which we all know is greater than on the American side, we must continue, by indirection at least, to prevent that ruin to the Falls by keeping up the limitation on the importation. Briefly, as Mr. Foster requested, our belief is now as it was last June when we labored to get the bill extended before the time might expire, and when just by a stroke of good fortune we were able to get it reenacted in the closing days of Congress—we believe now more than ever that the original terms of the Burton bill are the ones to be adhered to.

The CHAIRMAN. In that connection let me ask if your association has ever appealed to the Dominion of Canada, or the Province of Ontario, not to take any more water for power purposes?

Mr. WATROUS. I know that an appeal has been made, not by myself directly but by other officers of the association, some years ago. It is reported that in a conversation between our president, Mr. McFarland, and Ambassador Bryce that the ambassador said if he could have his own way he would be glad to have a party in arousing Canadian recognition to beauty in the Falls. Up to the present time we have not discovered that Ontario has paid any particular attention to the scenic value of Niagara, although we are informed that one of the leading newspapers of Toronto is an enthusiastic defender of the preservation of Niagara from the beauty standpoint.

The CHAIRMAN. Do you or do you not believe that Canada under the provisions of the treaty will use all the water she is entitled to use?

Mr. WATROUS. I wish you would make that a little more definite. I do not think they will use it within the next two or three years.

The CHAIRMAN. Whenever they want to use water?

Mr. WATROUS. Eventually they may, but I do not believe that inside of two or three years there is going to rise up a lot of new cities that will use power.

The CHAIRMAN. In other words, you have no doubt that Canada will take advantage of the terms of the treaty and use whenever she wants to use it the entire 36,000 cubic feet of water?

Mr. WATROUS. From the physical and structural standpoint I have a good deal of doubt of any such immediate utilization.

The CHAIRMAN. When they want to use it, they will use it?

Mr. WATROUS. Possibly.

Mr. FLOOD. If they do it will be some time in the future, won't it?

Mr. WATROUS. Yes, sir; I have not allowed the Canadian situation to be very much of a bugaboo in my own mind.

The CHAIRMAN. You are requesting the committee to stop the importation of power from Canada to the extent that it is now restricted under the terms of the Burton Act, and also to prevent this additional 4,400 cubic feet of water being utilized on this side?

Mr. WATROUS. Yes, sir.

The CHAIRMAN. That is your position?

Mr. WATROUS. Yes, sir; and it is the position I take based on the reports of the Army engineers.

The CHAIRMAN. If the people on the American side use the amount of water they are allowed under the treaty of 20,000 cubic feet a second, do you believe, from your knowledge and investigation, that it will injure the scenic beauty of the Falls?

Mr. WATROUS. I believe it is based on the report of the Army engineers.

The CHAIRMAN. Gen. Bixby said the other day that it would be unappreciable.

Mr. WATROUS. I doubt if I could discover it with the naked eye, but the investigations and the observations are to the effect that there has been an appreciable withdrawal of water from the Falls. It has been unfortunate, in the opinion of most of us, that there has been any.

The CHAIRMAN. Do you believe the erosion going on injures the scenic beauty of the Falls?

Mr. WATROUS. Yes, sir.

The CHAIRMAN. That it has something to do with it? We can not change natural laws.

Mr. WATROUS. We can not really interfere with the operations of Mother Nature.

The CHAIRMAN. Quite true. The question is whether taking this small amount of water injures the scenic effect of the Falls, or whether the injury to the Falls is not on account of geological action and beyond our control?

Mr. WATROUS. Not according to the reports that are made. The water taken away has had the effect of reducing the amount going over the crest of the Falls. That is a different proposition from the receding of the brink of the Falls.

Mr. FLOOD. There was a gentleman here just now with a proposition to stop that.

Mr. WATROUS. I have not read his complete statement.

The CHAIRMAN. It will be in the record.

Mr. WATROUS. I read this letter of Mr. Hudson, Mr. Chairman, as the expression of a business man for whose ability I have the greatest admiration. He writes to Senator Burton under date of May 6. Bear in mind, this is Detroit, where it is alleged they are so keen to get cheaper electricity. By the way, seriously speaking, have we discovered that these cheap things ever amount to anything? When there is one company that has an established rate, does it often happen that another company comes in and gives us anything cheaper? Mr. Hudson writes:

I am exceedingly interested in Niagara Falls. For 40 years I have been in the habit of going there. I have never seen anything that compares with the Falls in grandeur, and I have been utterly opposed to diverting the waters from their natural course.

I think we made a mistake in giving the power companies any rights there at all. They now use 34,000 cubic feet per second and want 50,000. I feel very earnestly that their request should be denied. The enormous amount of water that went over the Falls before any of it was diverted was none too much, and now in many places the decrease is noticeable.

A pretty good statement from a recognized business man. You can not say it is sentiment. The other day we were alleged to be suffering from neurasthenia. I hope not; but the sentiment of the people as it has come to us, as it came to us in 1906 when we first took up this matter, and as it has been renewed, caused us to lead in the effort to get the Burton bill renewed.

Mr. FLOOD. Is it a fact that they are using 34,000 feet?

Mr. WATROUS. He says 34,000; I should think it would be 26,000. He may have stretched that a little. Whatever they are using it has been sufficient to do more or less damage to the Falls.

Mr. FLOOD. Less than half what they proposed to use?

Mr. WATROUS (reading):

I am forced to state that existing diversions have already seriously interfered with and injured the scenic grandeur of Niagara Falls at the Horseshoe, and that this injury and interference will probably be soon emphasized by the effects due to the prevalence of lower stages on Lake Erie and the upper lakes.

The CHAIRMAN. Who made that report?

Mr. WATROUS. The Chief of the Army Engineers.

The CHAIRMAN. What is his name?

Mr. WATROUS. I am not sure. I think at that time the Chief of Engineers was Gen. Marshall. It was that statement that led us to make such an urgent appeal for the renewal of the terms of the Burton bill a year ago, and last June and last August. That is the statement of an expert. I believe in the service of experts. Understand, we are carrying on a wide range of good work, we think. We are urging cities to do comprehensive city planning; we are proposing a bureau for our national parks, and we believe in the service of experts. In the handling of Niagara Falls we believe in experts, and believe we have those experts in our regular department of the Army.

If you want someone to whom you could put more detailed questions, I ask you to await the appearance of Mr. McFarland, who is in a position to answer those more adequately than I can hope to. I know and you know, gentlemen, because you have had expressions from them, that the sentiment of the people at large is growing more and more in favor of recognizing the value of these scenic wonders and particularly of Niagara Falls.

There are other ways of getting power that I can cite you if you do not know of them already. There is the wonderful power development going on in North Carolina where they are developing power from small mountain streams without working any great injury to any number of people from the scenic standpoint. Do not think that we are attacking all power propositions. We are not. We have been standing steadfastly for the preservation of Niagara Falls, notwithstanding the demands of these great companies who wish to make money from them. Only recently we were urged to lend a hand to the preservation of certain falls down in Georgia. It did not seem to us that it was a national undertaking of sufficient importance to enlist our attention. We have realized that Niagara

is the one great thing. You do not need to be told by me that the people of foreign countries know only of Niagara Falls when they think of scenic wonders in the United States.

The CHAIRMAN. Did your civic association oppose the ratification of the treaty when it was under consideration?

Mr. WATROUS. We were in consultation—I was not; it was not my good fortune to be secretary at that time—with the Secretary of State and with the ambassador. We were called upon for our views, and we were given to understand that the treaty would very fully recognize the demands of the people for the preservation of the beautiful. I am going to tell you frankly that I am not well satisfied with the treaty. I do not think the treaty comes up to the demands at all.

Mr. CHAIRMAN. It is the supreme law of the land, is it not?

Mr. WATROUS. I believe that it is.

The CHAIRMAN. We ought to carry out the treaty.

Mr. WATROUS. We can do it. There is nothing mandatory about the water that may be taken from the American side. It says there may be a diversion of 20,000 cubic feet a second, and Congress certainly has the power to decide how much of that may be used.

Mr. FLOOD. That is a right that is given to American citizens which we need or need not exercise as we choose, as we see fit.

The CHAIRMAN. You are firmly of the opinion that the diversion of the water is injuring the Falls?

Mr. WATROUS. Yes, sir; I am firmly convinced of that.

Mr. COOPER. New York is preserving the Palisades, is it not simply as a matter of scenic beauty?

Mr. WATROUS. Yes, sir.

Mr. COOPER. They were blasting them down to secure stone for paving purposes.

Mr. FLOOD. Do you think the diversion of 26,000 feet of water has already injured the scenic beauty of the Falls? I understand that at this time they are diverting 26,000 cubic feet a second; 15,000 or more on this side and 11,000 on the Canadian side. Do you think that has already injured the scenic beauty of the Falls?

Mr. WATROUS. I do; yes, sir.

Mr. FLOOD. Then to divert 56,000—

Mr. WATROUS. Would be, I think, very, very injurious. I think there is only one way to stop it on the Canadian side. We can not tell them what they can do, but we can say that there shall be a limit on the importation.

Mr. FLOOD. They raised the vested rights question six years ago, did they?

Mr. WATROUS. The question as propounded by Mr. Brown as to the vested rights of the companies was very, very thoroughly considered, I am told, by the waterways commission and the others who drew up the Burton bill, and it has always seemed to us that if the companies, believing they had such a vested right, were so thoroughly convinced of it they ought to have put it to the test right then and there. They might have saved themselves a great deal of money—surely much peace of mind and relief from the attacks on them. Now, for their peace of mind, why don't they put it to the test?

Mr. BROWN. Those rights were recognized not only by the Burton law but by the treaty.

Mr. WATROUS. It should be borne in mind, Mr. Chairman, that when the Burton bill was drawn it was recognized that there were existing power companies that had put up large amounts of money for their plants, and it was for that reason that we mentioned in the Burton bill who was to receive the permits. I am going to read a paragraph written by our president.

Mr. FLOOD. What is the extent of the life of a power company?

Mr. WATROUS. It is a perpetual charter, as far as the companies are concerned. The life of the treaty was to be five years.

Mr. SCOVELL. The law of the State of New York provides for corporate existence by allowing certain certificates whether you are chartered by act of the legislature or incorporated under State law.

Mr. WATROUS. I am not prepared, Mr. Chairman, to speak very definitely of the New York phase of this proposition. It does occur to me, though, that as between the States and the Nation we have the old-fashioned idea that when the Federal Government is back of a proposition it is back of it a little stronger than when it is backed by a State. I presume now that I am getting off onto questions of law that I have not a right to talk on. You know how our State policies change. They are likely to be changed very often. I do not see any particular reason why Congress should give up that jurisdiction. You would have the question of jurisdiction always before you.

Mr. BROWN. Mr. Watrous, on what do you base this right of Federal control to protect scenic beauty?

Mr. WATROUS. They have got the right up there; it is a navigable stream, and it is a boundary line.

Let me read this extract from the decision which is cited in that Colorado case:

We say that the creation of a summer resort is a beneficial use. Is it no benefit to the public to spend money in making a beautiful place in nature visible and enjoyable? Is it not in line with public health, rest, and recreation? If a person takes a stream and, after putting in waterfalls, ponds, bridges, walls, shrubbery, and blue-grass sod, works it into a beautiful home, that is a beneficial use. It is a benefit to the weary, ailing, and feeble that they can have the wild beauties of nature placed at their convenient disposal. Is a piece of canvas valuable only for a tent fly, but worthless as a painting? Is a block of stone beneficially used when put into the walls of a dam and not beneficially used when carved into a piece of statuary? Is the test dollars, or has beauty of scenery, rest, recreation, health, enjoyment something to do with it? Is there no beneficial use except that which is purely commercial?

It would seem that parks and playgrounds and blue grass are benefits and their uses beneficial although there is no profit derived from them; if not, then the contention of the defendant corporation must be maintained that nothing but money-making schemes are beneficial. The world delights in scenic beauty, but must scenic beauty disappear because it has no appraised cash value? If this defendant corporation takes the water out of Cascade Canyon, it can take the water out of the Seven Falls and Cheyenne Canyon, and Glen Eyrie, and the beautiful parks, and homes and summer resorts of the State. We feel compelled to say that there are beneficial uses of the fall of water than the mere production of commodities in competition with others now existing. When the defendant company says the complainants are putting the fall of the water to no beneficial use, it means that the complainants are not ruining the beautiful scenery for cash.

Mr. BROWN. Did you bear in mind when you cited the Colorado decision that in Colorado there is no law of riparian rights? There

are no riparian rights in Colorado; but there is in New York and every State east of the Mississippi.

Mr. WATROUS. Those are matters which the States regulate for themselves.

Mr. BROWN. You are right. Each State regulates for itself, and that is why in Colorado there is no riparian-rights law and in New York there is.

Mr. WATROUS. Colorado changed the situation at one time——

Mr. BROWN. Colorado did not change it. The law of appropriation grew up from the custom which prevailed upon the lands before ever the State was organized. That custom evolved into a law, and that local law was against riparian rights and in favor of appropriation, and as such local law is recognized by the Federal courts. This case you cite is purely one as to rights by prior appropriation. It has nothing to do with riparian rights.

(Thereupon at 5.30 o'clock p. m. the committee adjourned until tomorrow at 2 o'clock p. m.)

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COMMITTEE ON FOREIGN AFFAIRS,  
HOUSE OF REPRESENTATIVES,

*January 20, 1912.*

The committee met at 2 o'clock p. m. Hon. William Sulzer (chairman) presiding.

The CHAIRMAN. The committee will be in order.

**STATEMENT OF MR. J. WINTHROP SPENCER IN THE MATTER OF  
THE PRESERVATION OF NIAGARA FALLS.**

The CHAIRMAN. Mr. Spencer desires to be heard. You may proceed, Mr. Spencer.

Mr. SPENCER. I represent those people who are anxious to know the facts and their direct measurements in favor of the preservation of Niagara Falls. I speak from personal observation on account of having made the investigations myself. In order to save time, I would ask permission of the chairman to read this paper, and as there are a number of figures in this it will be less difficult for the reporter if I hand a copy to the chairman, together with several photographs which have been taken of the Falls.

The rate of the recession of the Falls, obtained from measurements made by Prof. James Hall in 1842, and my own in 1905, was found to average 4.2 feet per annum for the whole width of the gorge. Mine was the fifth survey. While this figure is the mean rate, there are years of no appreciable retreat, during which the soft underlying rocks are being eaten away; subsequently the hard upper rocks collapse. In 1678 Hennepin showed a cross fall the position of which we have been able to locate. Thus we know the approximate rate for 227 years at an average of 4 feet per annum.

I succeeded in making soundings under the Falls themselves. The depth to the fallen blocks is 72 feet. Here the lower beds are all soft. The rapids above the Falls descend 55 feet. On account of the thickening of the upper hard rocks and the downward slope of the lower rocks the rate of recession is diminishing to an average of 2½ feet per year.

You have been told by many gentlemen that the diversion has produced no effect upon the Falls. I have no doubt that they have been honest in their belief, particularly as temporary conditions favored such. A man usually does not see himself growing old until suddenly awakened to the fact, but these gentlemen offer no grounds for their beliefs, nor were they likely to be in a position to give reliable opinions.

The reason for these statements is based upon the fact that between 1903 and 1910 high water prevailed, thus more or less obscuring the effect of diversion. Thus during the five years, 1906-1910, there was a discharge of more than 200,000 gross horsepower per second than during the 15 preceding years. The mean stage of water during 1911 was low and the discharge fell to more than 264,000 gross horsepower below the average between 1891 and 1905, or if we take the average of the month of January, 1911, the diminution was more than 500,000 gross horsepower. Every foot of water from above the upper rapids represents 24 gross horsepower. It is a question, then, how much of this can be used or wasted.

Another fundamental point has not been shown to you. According to the Bruckner law, the cycle of wet and dry years is about 36 years. Niagara appears to have two subcycles. A period of low water ended in 1835; high water prevailed until 1845; low water until 1856; high water until 1864; low water until 1875; high water until 1887; low water until 1902, inclusive; since then high water until 1911. During these periods there has been an occasional abnormal year. Nineteen hundred and eleven may have been such, perhaps due to excessive evaporation, as prevailing low water does not seem to be due for some two years more. But 1911 may be the beginning of a low-water period; then the fallacy of the claim of no effect upon the Falls will be seen. The mean discharge of the river from 1906 to 1910 was 211,000 feet per second; the mean discharge for the 15 preceding years was 204,000 feet per second, and for weeks together it may fall as low as 160,000 feet per second.

The Horseshoe Falls was formerly 2,900 feet in length. On account of the lowering of the water, the Canadians have cut off 415 feet from that end by the construction of the retaining wall. The Chief of Engineers told you that for the lowering by 4 inches on the New York side the equivalent amount on the Canadian side is 9 inches, but many people have forgotten this.

With the full use of the water, as under the treaty, the level will be lowered on the Goat Island side by more than 10 inches, and on the Canadian 23 inches. This includes the diversion by the Chicago Canal. The depth of water for 800 feet adjacent to Goat Island, excepting fissures, varies from less than 6 inches to a foot at the mean stage of the 15 years mentioned. I have often seen it so low that you could walk out on the New York side with perfect safety. With such diversion, as is in sight, the International Boundary Line would be out of water and the remaining portion of the Horseshoe Falls would be entirely within the Canadian domain. Plate 23 of the Engineer's Report shows you how low the water is. For three or four months during 1911 the water was as low, or lower than shown in this plate.

This picture [showing first picture] was taken in 1900. Where these Falls in the picture formerly existed it is now simply black

rock. Plate II of the Engineer's Report [showing photograph] will show you this. As I stated before, on several occasions I could with perfect safety walk out along here [indicating] on the west of the Falls.

Mr. CLINE. How deep is the water that flows over the Falls at that point now?

Mr. SPENCER. It varies from a foot to 6 inches and the maximum depth of the water at the crest of the upper rapids is not over 9 feet at any one point, and the major portion of that would be less than 7 feet, and where the Falls are deepest, I mean on the crest of the line, which is the Canadian side, I do not think any part is over 8 or 9 feet. As I say on the crest of the rapids above the Falls the water does not reach 9 feet at any one point. On the American Falls the mean depth is only about 3 feet at the upper rapids. At the crest of the Falls it is much less.

Mr. CLINE. Well, now, will that be seriously affected if they take all the water that is supposed to be taken under the treaty, in your opinion?

Mr. SPENCER. It will, as will be shown in this paper.

The question before you is how much the diversion of 4,400 cubic feet per second will affect the Falls. Again if you will look at plate 22 of the Engineer's Report, and compare figures 1 and 2, you will see the difference between the effect of 200,000 and 196,000 feet, that is the withdrawal of 4,000 feet. During three months of last winter not merely was the discharge reduced by this 4,000 feet but to double this amount. Now, this is a question that effects 800 feet on the New York side of the great cataract. The American Falls is not effected to such a great degree, but half of those Falls next to Goat Island have only a few inches of water and I have been over more than half of the Falls when partially drained.

I will say here that after four months, three of these continuous months, in the winter and that is November, the condition was even worse than is shown here, that is not for one day but the mean for those months. If you will again look at this portion of the Engineer's Report it throws much light upon the subject [exhibiting photograph of the Falls]. This photograph was taken when there was a discharge of 196,000 feet per second [exhibiting another photograph]. This photograph was taken when there was a discharge of 200,000 cubic feet per second. The difference is 4,000 cubic feet per second. Now, during 1911 there was 196,000 feet, I mean for the whole year, remember, the discharge was equal only to 192,000 feet per second. Consequently the difference is twice what this figure is up here, that is to say—I will repeat—the mean height of the water in 1906 was 4,000 feet below what this picture shows [indicating]. This picture [indicating] shows 4,000 feet below what this picture shows [indicating].

Now, the American Falls is not affected to the same extent as this New York end of the Horseshoe, but the southern half; that is, the half next to Goat Island, is only 6 feet 10 inches deep, so that the southern end of the American Falls is only a little better off than—this portion of the Horseshoe is better off because the water is coming more from the Horseshoe than it is from the American channel.

Now, with regard to the subject of the lower rapids.



The subject of the lower rapids has been mentioned. One of them has a height of 51 feet. They are part of the falls of Niagara and are visited by just as many people. In magnificence neither these nor the rapids above the Falls are inferior to the falling sheet of water. You can not cut off an arm and a leg of a man and leave him intact. But here is another point, if you divert the water from the pool below the Falls you lower its level, which increases the rate of recession of the main Falls themselves. The question of the international relationship of this water I shall not discuss.

The mean level of Lake Erie during the whole of 1911 was  $7\frac{1}{2}$  inches below the level of the preceding 20 years. A part of this at least was due to the diversion of the waters. Three of the companies take their water from the basin above the rapids, and in doing so increase the size of the outlets of this basin. For the large ships each inch of cargo, I am told, represents \$100 in freight.

Gentlemen, I am not hostile to the power companies asking for more water. Let me say that had it not been for the persistent refusal of the Ontario government I believe that the quantity allowed on that side, under the treaty would have been greatly curtailed, and as you know two of the power companies there belong to Americans, who through the Ontario government have obtained greater privileges than those located in New York. While not hostile to these companies nor to the Buffalo Drainage Canal, which could obtain nearly 36 gross horsepower per foot, yet I think that the people have a right to a presentation of their side of the question, and I have offered you facts which you may take in consideration with the subject. If I may be allowed to cite a British anecdote. The Earl of Kimberley was secretary for the colonies. He took the draft of the treaty, after the first Boer War, to Queen Victoria. She said, "May I ask you to reconsider, for this will be a fatal mistake." He returned; again she pleaded for another reconsideration. He replied, "It is settled. It is the will of the people." She replied, "Then I shall sign. But you will live to see the day when Britain will regret it." Kimberley said, "We have learned to regret it. Her Majesty was right."

Now, gentlemen, let me say that under the full diversion of water as granted by the treaty, the main cataract will have been reduced to one-half of its breadth, as also one-half of the American Falls. The treaty permits a diversion of 28 per cent for mean discharge, or 33 per cent, including the Chicago canal. This rises to 40 per cent during months of low water. The extreme disturbance on account of wind lasts for only a few hours or a day and may be rejected from consideration. However, for a week in February, 1909, during low water the flow of the water was suspended from the American Falls and 800 feet of the main cataract, next to Goat Island, a forerunner of future conditions. Gentlemen, it is for you to consider the facts as related to the whole people on the one hand, and on the other whether it is the advantage to turn Niagara into aluminum carbide, etc., for the other general manufacturing uses do not consume an inordinate demand for power. The Alluminum Co., according to the report, was for years working on a capital of \$3,200,000. Two or three years ago they were able to pay a stock bonus of 500 per cent, thus bringing the capital up to \$16,-

000,000. It does not appear that the American people received any bonus for their water.

Mr. KENDALL. How is that last statement true?

Mr. SPENCER. Under the treaty.

Mr. KENDALL. I heard that, but what did you say about 40 per cent?

Mr. SPENCER. When the water is at a low stage, I mean.

Mr. KENDALL. The full discharge of the Falls will be 40 per cent?

Mr. SPENCER. At the low stage of the water, lasting for a month or more, and as any variation as to that lasts only for a few hours it is not worth considering one way or the other. It might be enough to stop the works for a few hours.

I can show you a photograph of this which you can pass around showing the stability of the flow [passing photographs around the committee room].

Mr. KENDALL. But that is a photograph illustrating the situation there during that week in February, is it?

Mr. SPENCER. Yes; that is prophetic of what is going to happen with a full outturn of the power.

Mr. KENDALL. Well, it is descriptive of what has happened under those conditions.

Mr. SPENCER. It has happened under those conditions. It has been diminished on two other occasions, but never a stoppage of the water on the American Falls occurred until February. Subsequent to that, the year after, the American Falls were broken up into four parts, but I did not get photographs of that. These photographs were my own. That is a determination of the water on our New York side of the Horseshoe [illustrating]. This also shows the retaining wall by which 415 feet are permanently diverted.

Mr. COOPER. Do you mean that 400 feet out from the Canadian side there was a wall erected which prevents the water from flowing?

Mr. SPENCER. Absolutely, for 415 feet, and the wall is shown in that picture. Now, I will not presume to suggest anything. I simply brought these facts to you for your consideration.

Mr. FOSTER. Will it interrupt you if I ask you the purpose of this retaining wall?

Mr. SPENCER. I will state, as you were told by the Chief of Engineers, that the greatest effect was on the Canadian side; where it is 6 inches on the Goat Island side it is 9 inches on the Canadian side. When the first power plants were established they drew the greatest portion of their water not from the New York channel—that is, the Horseshoe channel—but drew the greater part of the Canadian channel, the result was the water flowing back, and before they began their work, about 1901—I can not give you the exact date—they built this retaining wall and filled in with earth behind it, and it runs along 415 feet at the end of the Falls, so no matter what the condition of the rainfall is that has been destroyed to that extent.

Mr. FOSTER. By the Canadian Government?

Mr. SPENCER. If you draw me into the question of the Canadian Government—it was done for a simple purpose. Prior to that the water was usually drawn off from the Canadian side. This wall was built to block the water, and to send it back to the power house.

Mr. BROWN. That was done as a part of the park system—to enable spectators on the Canadian side a better view of the Falls?

Mr. SPENCER. Not at all. I was at Niagara Falls practically all the time this was being constructed, and when it was thrown open. Now to come to the question—

Mr. KENDALL. Before you leave that question—the effect of establishing that retaining wall was to destroy 415 feet of the Falls, was it?

Mr. SPENCER. Four hundred and fifteen feet of the main Horseshoe Falls on the Canadian end of the Horseshoe.

Mr. KENDALL. But there had been a flow of 415 feet of water over that until that time?

Mr. SPENCER. Yes; prior to that time. It took about one and a half years before it was completed.

Mr. KENDALL. That was diversion of the water that had previously gone over that wall toward the center of the wall?

Mr. SPENCER. Yes; high water has been lowered by the diversion of that water, and it got to be very shoaly.

Now, it is a question whether it is pleasing to destroy the Falls or to exploit the carbide works and those other great consumers of power, the aluminum company; and I will mention here, perhaps some you do not know, according to their report they have been working with a capital of only \$200,000, but three years ago they were able to pay a stock bonus of 500 per cent, but the American people did not get any part of that bonus.

The Canadians now charge rental for that water; the American people receive none, nor do they receive duty. In an editorial of the organ of the Ontario government, January 18, it was stated that early in 1911 the margin of possible exports has a long way to go before being exhausted, and that the removal of restrictions would seem to be somewhat superfluous. It is stated that the consumption in Ontario is comparatively limited, and that the Canadian Government can impose an export duty.

Mr. KENDALL. Now, that means, I take it, that there is plenty of water there that may be exported if it is not utilized there.

Mr. SPENCER. There is plenty of water available under the present agreement, and it would be superfluous to give permission to pass any more. I should have brought that clipping I received only a few minutes before I came here, but I forgot to bring it down. Now, of course, the Canadian Government has the power to apply an export duty, as the statement mentions.

Mr. BROWN. May I ask you this question: The Canadian power companies have to reserve one-half of their power for sale on the Canadian Government?

Mr. SPENCER. Yes.

Mr. BROWN. And they can only export the other half of each company, not to the aggregate sums of all the companies, so that if the Canadian Power Co. is given the privilege to export one-half of its power and the Ontario Co. one-half of its power then there could be no export unless there was some other company ready to develop two for every one that was exported.

Mr. SPENCER. These two companies could increase their power of production, and by that means they could export more.

I wish to say one word in regard to the work of the International water-making machine. I have had something to do with that. It was originated by the late Andrew H. Green, of New York. That

was for the special purpose of saving the Falls from spoliation. I had the honor on several occasions to assist the late Secretary Hay and also the late Senator Platt, so that I am thoroughly informed with regard to the methods of that International water-making machine.

Gentlemen, I thank you for your attention.

Mr. KENDALL. Do you represent some civic association?

Mr. SPENCER. I am a member of a civic association. If you wish to know how I got in connection with this I will give it to you in a few minutes.

Mr. KENDALL. The only purpose I had was to ascertain the reason for your being here this afternoon, which is a very proper one altogether.

Mr. SPENCER. The reason is this: I began as a young man to study the situation at Niagara Falls; later I began to publish for the Niagara Falls Park Commission. I published a lengthy report. I began in 1902, or about that, my association with Mr. Greene, and on account of this previous association and the fact that I was connected with the work and other matters relating to Niagara Falls it was thought but right that I should have an opportunity to carry on scientific investigations. Although an American citizen, I was asked by the geological survey of Canada to make a full report upon the Falls. I did not have the facilities that the engineers had in some directions. I had more facilities in some other directions. The result of that was I published a work of 500 pages on the scientific history of the Falls, a part of which is included in the statistics which I have been giving you. I have kept up with the information which has been supplied by the engineers department, until the present time, consequently I am familiar—there may be some details I do not know—but I am familiar with almost everything of a scientific nature concerning the Falls of Niagara.

Mr. KENDALL. I am glad you made this subsequent statement. I think it is valuable.

The CHAIRMAN. Mr. Spencer, will you put into the record your statement with regard to the recession of the Falls by reason of the erosion?

Mr. SPENCER. I shall be very glad to do so, and I therefore hand you a copy of my paper on that subject, which, together with what I have previously stated, covers the whole question.

[Bulletin of the Geological Society of America. Vol. 21, p. 447-448, pl. 32-34, Aug. 10, 1910.]

#### INTERRUPTION IN THE FLOW OF THE FALLS OF NIAGARA IN FEBRUARY, 1909.

(By J. W. SPENCER. Read before the society Dec. 29, 1909.)

#### PREVIOUS FLUCTUATIONS.

Since the year 1890, the mean level of Lake Erie has fallen about 1 foot<sup>1</sup> and the basin above Goat Island about a foot and a half. From that year until the end of 1905, the mean annual fluctuations varied scarcely more than 1 foot, while in one case the mean monthly variation reached nearly 2 feet; but during the progress of storms, when the wind has changed to the opposite direction, the fluctuations have been found to reach 5 or even 6 feet.

<sup>1</sup>J. W. Spencer: Evolution of the Falls of Niagara. Geological Survey of Canada, p. 190.

## FLUCTUATIONS OF 1909.

During January and the early part of February, 1909, the lake level was below that of the mean, but on February 10 Lake Erie rose nearly 3 feet above the mean annual average height (1889-1906, inclusive), while in the following and succeeding days it fell with a northerly wind to 4 feet below the mean (as shown by the records of the gauges as furnished the United States Lake Survey). This was on February 14. At this time the weather was very cold. On account of the reduced depth of the water on the upper rapids, as the ice was forming, it remained anchored to the projecting rocks and was not carried over the falls; so that the New York channel and the main channel to about 600 feet outside of Goat Island were frozen over, except one small lead, which scarcely showed any current where ordinarily it is a rushing torrent. It must be emphasized that the ice was not an accumulation of blocks carried down from Lake Erie, as often occurs, like in the jam of the following April. As the blizzard continued, with its falling snow, the lake level fell to the lowest on February 14, and almost all of the water beneath the ice was withdrawn so that the American Falls of 1,000 feet in breadth were drained, except four or five insignificant streamlets, as shown in plate 32. The eastern side of the main falls, adjacent to Goat Island, was drained for 800 feet, as may be seen in plate 33, figure 1. The end of the ice-covered rock rim of the first cascade of the upper rapids, with the frozen river in front of Goat Island, is shown in plate 34, figure 1. On the Canadian side, the main falls, which have already been curtailed by 415 feet, due to power diversion, was further drained by about 200 feet, as illustrated in plate 33, figure 2. Another photograph, not reproduced, shows that in the middle of the main cataract the rocks almost reached the surface; but without allowing for these thinly covered masses, the total shrinkage of the main falls amounted to a reduction of the crest line from 2,950 feet (in 1901) to 1,000, and the diameter was shortened from 1,200 feet to less than 800.

From the foregoing it may be understood that the cause of Niagara "running dry," as expressed by the newspapers, was due to the recent lowering of the river level (partly owing to power diversion), thus permitting the formation of the ice barriers, which cut off the reduced supply of water during a strong northerly wind, in very cold weather, at a time of the low stages of Lake Erie. This condition continued for nearly a week. Had there been no ice, the extreme effect of the wind would have lasted for only a day, even if the volume of water had been below the normal amount. The Whirlpool Rapids were lowered by many feet, so that the usual rushing, boiling, pitching, torrents seemed tamed, as may be seen in plate 34, figure 2.

## SIMILAR OCCURRENCES.

Within the historic record the only other times when similar phenomena have been seen were the following: On March 29, 1848, the ice from Lake Erie blocked the river for one day, as described by the Hon. Peter A. Porter; on March 22, 1893, a partial stoppage occurred which also appeared to have been due to the blockage of lake ice; and on February 29, 1896, there was another shrinkage of the falls. None of these cases were comparable to that of 1909, when the phenomena lasted for nearly a week from February 14. With the continued draining of the falls, a repetition of these features should be expected. In part, they represent what will become a permanent condition, owing to power diversion. The above is from my personal observations, and the photographs are of my taking or those of Mr. E. Deming Smith, of Niagara Falls, who accompanied me.

NOTE.—In March, 1910, owing to the shoaling of the waters on the upper rapids, the ice was caught and so barricaded the New York channel that the American Falls were again damaged, being broken into four parts.

Mr. COOPER. Do you intend to have these photographs put in his statement?

The CHAIRMAN. No; they will not be printed, but you might leave those photographs here, Mr. Spencer.

Mr. SPENCER. They are in the report of the Engineers.



GOAT ISLAND END OF MAIN OR CANADIAN FALLS.

Drained February 16, 1909 (Spencer).



WESTERN END OF MAIN FALLS.

Already curtailed by length of wall. Further drained Febuary 16, 1909 (Spencer).





END OF ICE-COVERED AND DRAINED RIM OF FIRST CASCADE OF UPPER RAPIDS  
ABOVE THE "SISTER ISLANDS," FEBRUARY 17, 1909 (SMITH).



WHIRLPOOL RAPIDS AT VERY LOW WATER, FEBRUARY 17, 1909 (LOOKING  
DOWNWARD) (SMITH).







AMERICAN FALLS, 1,000 FEET LONG, FROZEN AND DRAINED FEBRUARY 17, 1909 (SPENCER).



I laid on the table the other day a copy of this pamphlet, and if you will look at it at this place in here you will see the lines marked showing what has been cut off and the future effect on the Falls.

REFERENDUM LEAGUE OF ERIE COUNTY,  
Buffalo, N. Y., January 19, 1912.

To the HON. WM. SULZER,  
Chairman of the Committee on Foreign Affairs,  
House of Representatives, Washington, D. C.

DEAR SIR: The city of Buffalo in November, 1905, voted to establish a municipal electric-lighting and power plant for the benefit of the city and its inhabitants.

In order to get the electric current for its municipal distributing plant at a reasonable price, Buffalo must get electrical power from Niagara Falls by and through a State generating and transmission plant.

Any further grant by the United States Government of the unused 4,400 cubic feet of water per second, which, under the present treaty, is permitted to be diverted on the American side of Niagara Falls, should be granted by the General Government to the State of New York.

Electricity can be produced at Niagara Falls using the public waters at a cost not to exceed \$6 for horsepower per year, and is actually sold to the Ontario Government for less than \$10 per horsepower per year.

Power produced at the Falls and transmitted to a much greater distance from the Falls than Buffalo is sold for less than the prices charged for like amounts of power in Buffalo.

The distributing company in Buffalo charges the small consumer at the rate of \$800 per horsepower per annum, as against the \$6 per horsepower, cost of production at the Falls.

The several companies which produce, transmit, and distribute electricity either have a community of interest or unite in a policy adverse to the small consumer.

The Niagara Falls Power Co. sells 450,000,000 kilowatts per annum for one and a quarter millions of dollars.

The Cataract Power & Conduit Co. sells one-third of this amount for \$1,000,000.

And the Buffalo General Electric Co. sells one-twentieth of the first amount for \$1,000,000.

The city of Buffalo can be lighted and heated at night, both publicly and privately, by less than 200,000 horsepower. The scenic beauty of Niagara Falls need not be considered at night, and 1,000,000 horsepower could be generated on the American side alone, at night. It is suggested that sufficient horsepower for heat and power uses in Buffalo can be generated and transmitted at night and stored by modern methods for day use in Buffalo.

This organization, composed of over 5,000 citizens of Buffalo, and speaking for the small consumer of Buffalo, to whom light and heat at reasonable prices are necessities, respectfully asks that action be taken to modify the existing treaty so that the full amount of water at Niagara Falls can be used at night; that the same be granted by the General Government to the State on condition that it be used for a State generating and transmitting plant, or controlled by the State in the interest of the general public or the small consumer. It is suggested that even if the State of New York will not establish a State hydro-electric, generation, and transmission plant that all future grants of power be made by the United States Government to the State of New York alone, upon the express condition that prices shall not be charged by the producing companies greater than prices now charged to the Government of Ontario, and that prices charged by transmission and distributing companies shall be fair and reasonable to the small consumer, based on the actual cost of the power to these companies and the actual cost of transmission and distribution, with a fair profit added thereto.

All of which is respectfully submitted.

REFERENDUM LEAGUE OF ERIE COUNTY,  
LEWIS STOCKTON, *President*.  
FRANK C. PERKINS,  
*Consulting Engineer*.

The following table was prepared by an American firm of manufacturers on making investigations for a Canadian location.

Estimate is based on smallest business possible. Gas is the largest saving in Welland's favor, as our business requires much heat for forging; but for large users of power, that would be the greater factor. As your business increases, so, proportionately, do the advantages of Welland.

*Comparative statement on stated quantities.*

Localities.	Cost of 100 horsepower per year.	Natural gas, or equivalent (15,000 feet per day).	Site cost.	Freight rate, steel, Pittsburgh (20 cars).	Soft coal (50 tons).	Hard coal (50 tons).	Taxes (10 years).
		<i>Cents.</i>		<i>Cents.</i>	<i>Per ton.</i>	<i>Per ton.</i>	
Welland.....	<sup>1</sup> \$15.00	12	( <sup>2</sup> )	15	\$2.50	\$4.50	<sup>3</sup> \$5,000
Niagara Falls.....	<sup>1</sup> 15.00	15	( <sup>2</sup> )	16½	2.60	4.60	( <sup>2</sup> )
Hamilton.....	<sup>1</sup> 22.50	20	\$7,500	16½	3.00	5.15	<sup>3</sup> 100
Brantford.....	<sup>1</sup> 22.50	20	7,000	17½	3.35	5.20	( <sup>2</sup> )
Quebec.....	<sup>4</sup> 1,000.00	25	( <sup>2</sup> )	19	3.50	5.50	( <sup>2</sup> )
Toronto.....	<sup>1</sup> 25.00	30	10,000	19	3.35	6.00	250

Localities.	Water (5,000 gallons per day).	Switching charges (40 cars).	Number of railways.	Figures based upon these quantities per year.		Capital at 5 per cent.
	<i>Cents.</i>			Cost of running per year.	Extra capital required.	
Welland.....	6		7	\$2,800		\$55,000
Niagara Falls.....	10	<sup>4</sup> \$2.00	6	2,965		66,000
Hamilton.....	7½	2.00	3	4,410	\$7,500	90,000
Brantford.....	7½	2.50	2	4,415	7,000	90,000
Quebec.....	20	2.50	2	5,950	12,500	120,000
Toronto.....	6	2.50	6	4,450	12,500	90,000

<sup>1</sup> Electricity. <sup>2</sup> Free. <sup>3</sup> Fixed. <sup>4</sup> Car. <sup>5</sup> Year. <sup>6</sup> Steam plant. <sup>7</sup> Oil plant.

N. B. Toronto three times as far from Niagara Falls as Buffalo.

Mr. SPENCER. With regard to the total use of water, the Cataract Co. of Ontario, deriving its power from the Welland Canal, has an immense storage basin. From the reports of the lawsuit, it appears that the difference between an average consumption of water and that during the Peak Load may vary from 150 to 500 per cent.

From all of these considerations, so far as general manufacturing, lighting, and electric railway purposes are concerned, there is no reasonable prospect of the Canadian limit being reached in the near future. If, on the other hand, the great aluminum, carbide, and similar works are to consume the Falls of Niagara, what will there be left for general manufacturing purposes, employing vast bodies of labor, and for domestic purposes?

Gentlemen, I thank you for your attention. I can not begin to cover the scientific problems here, they are very complicated. But I am in a position to give you facts, because I myself have made many of the surveys and investigations of the Falls, covering years of work in the field, with the knowledge of what the engineers have measured, so that my work is not even an office compilation, and any further information that you desire from me will cheerfully be placed at your disposal, but I wish it to be remembered that I am not in hos-

tility to the vested rights of anyone, but some of the vested rights belong to the people.

The CHAIRMAN. Are there any other gentlemen present who desire to be heard this afternoon?

Mr. BROWN. One question Mr. Spencer knows about I might ask him.

The CHAIRMAN. Yes.

Mr. BROWN. Mr. Spencer, is it not true, or do you understand it to be true, that the unwatering of the Canadian end of the crest from the Horseshoe Falls prior to the time any diversions for power were made upon the Canadian side, had progressed so far that in 1902 the Canadian Park Commissioners caused 250 feet of the former crest, lying at that time unwatered, to be filled in for the purpose of improving the scenic effect of that part of the park?

Mr. SPENCER. I will say that the diversion of the water by the New York companies had affected the water on the Canadian side—that is, two New York companies had so diverted, deflected the water from the Canadian side that the water had receded and they were compelled to fill that in. But before that the earlier photographs show it, and this diversion was done on account of the continued increase of the lowering of the water on the Canadian side.

Mr. BROWN. Just a moment. Before 1902 there had been no substantial diversions upon the Canadian side?

Mr. SPENCER. The lower end of the water at that time had risen from the diversion by the New York power companies.

Mr. BROWN. But prior to 1902—I am speaking as to back in those times—the erosion from the Falls causing a recession of the crest of the Falls?

Mr. SPENCER. It was the diversion of the water. A great deal of the water on the upper rapids is now very thin. I have seen the time when during extremely low water one-fourth of the upper rapids have been bare.

Mr. BROWN. I was trying to compare your statement with this one made in the Canadian reports of the American engineers. That is all.

The CHAIRMAN. Is there a gentleman present who desires to be heard now in this matter?

Mr. DIFENDERFER. I suggest, Mr. Chairman, that you call Mr. Barton, if he is here.

Mr. BROWN. Let me say, Mr. Chairman, Mr. Barton went back to Niagara Falls last night. If you would like to hear from him I will ask him to come here and appear before your committee Tuesday.

Mr. DIFENDERFER. He is manager for the Hydraulic Co., is he not?

Mr. BROWN. Yes; for the Niagara Falls Co. Mr. Barton can give you any information you desire.

Mr. DIFENDERFER. I would like to question Mr. Barton on some points I have in view, but I hardly think I will request his coming here.

Mr. BROWN. Without any request, upon the statement of the committeeman, I will see that he is here. I am only too anxious to give them any figures.

The CHAIRMAN. We will now be pleased to hear from Maj. William B. Ladue, Corps of Engineers, War Department, Washington, D. C.

Maj. LADUE. There are only one or two matters that I wish to say anything about. The whole subject has been pretty thoroughly covered. In the first place let me say, as was said the other day, that the War Department is not in the attitude of urging that it be given charge of the supervision of these permits; but, if the War Department is to supervise the permits it will have to have an appropriation for that purpose. The Burton Act made an appropriation of \$50,000 for the necessary expenses for carrying out its provisions. When the Burton Act expires, without further renewal, of course we will not have any money available; and for any further operations which we may be called upon to undertake we will need money.

Mr. GARNER. You had better tell us, Major, how much you will need to provide any supervision that the War Department desires to undertake.

Maj. LADUE. I am not prepared at present to give definite figures; but I would suggest that the unexpended balance of the appropriation made by the Burton Act be reappropriated and made available for expenditure, in connection with any legislation which this committee may have in view.

The CHAIRMAN. How much is that unexpended balance?

Maj. LADUE. About \$22,290, as it stands now. In connection with the operations under the Burton Act the Secretary of War caused numerous investigations to be made and held a number of hearings in regard to the issuance of these permits. There is in these reports a good deal of matter which is of value, and which I think will be of value to the committee, which may possibly not be before the committee; and I would propose to leave here, for the information of the committee, copies of these various reports, including the decision rendered by the Secretary of War in 1907, fixing the conditions and limits of the original permits. I will simply lay this on the table.

The CHAIRMAN. Have you got that decision, Major?

Maj. LADUE. Yes.

The CHAIRMAN. Well, I think we had better put the decision in the record. We will put it in the record if there is no objection.

Maj. LADUE. I will put a copy in the record.

The CHAIRMAN. Now, if there is anything that you have that is not too voluminous that you think ought to go in the record, Major, we would be glad to have you put it in the record as a part of your remarks.

Maj. LADUE. I will add this paper. The other papers I have here I will simply leave on the committee's table for their information. I will also present this set of blue prints showing the variations in the levels of the Great Lakes for a number of years. Gen. Bixby desired me to present to the committee this data as part of the information on the subject, which will be of value to anyone interested in that branch of the subject, in connection with the operations under the Burton Act.

Mr. COOPER. One moment. Would not this be very valuable, this literature, for the record?

The CHAIRMAN. Very well; put it in.

WAR DEPARTMENT,  
Washington, January 18, 1907.

In the matter of applications under the Burton Act for the issue of permits to divert water for power from the Niagara Falls on the American side and to transmit electrical current, developed from water power on the Canadian side, into the United States.

OPINION BY THE SECRETARY OF WAR.

Ten or more applications have been filed in this department for the issuing of permits by the Secretary of War, part of them for the diversion of water for power from Niagara Falls on the American side, and the remainder for the transmission of electrical currents, developed from water diverted from the Falls on the Canadian side, into the United States. These applications are filed under what is known as the Burton Act, passed June 20, 1906, and entitled "An act for the control and regulation of the waters of the Niagara River, for the preservation of Niagara Falls, and for other purposes."

The first section of the act forbids the diversion of water from the Niagara River, or its tributaries in the State of New York, except with the consent of the Secretary of War, as authorized in section 2, with a proviso, the meaning of which is not here important.

The second, fourth, and fifth sections of the act I set out in full as follows:

"SEC. 2. That the Secretary of War is hereby authorized to grant permits for the diversion of water in the United States from said Niagara River or its tributaries for the creation of power to individuals, companies, or corporations which are now actually producing power from the waters of said river, or its tributaries, in the State of New York, or from the Erie Canal; also permits for the transmission of power from the Dominion of Canada into the United States, to companies legally authorized therefor, both for diversion and transmission, as hereinafter stated, but permits for diversion shall be issued only to the individuals, companies, or corporations as aforesaid, and only to the amount now actually in use or contracted to be used in factories the buildings for which are now in process of construction, not exceeding to any one individual, company or corporation as aforesaid, a maximum amount of eight thousand six hundred cubic feet per second, and not exceeding to all individuals, companies, or corporations as aforesaid an aggregate amount of fifteen thousand six hundred cubic feet per second; but no revocable permits shall be issued by the said Secretary under the provisions hereafter set forth for the diversion of additional amounts of water from the said river or its tributaries until the approximate amount for which permits may be issued as above, to wit, fifteen thousand six hundred cubic feet per second, shall for a period of not less than six months have been diverted from the waters of said river or its tributaries, in the State of New York: *Provided*, That the said Secretary, subject to the provisions of section five of this act, under the limitations relating to time above set forth is hereby authorized to grant revocable permits, from time to time, to such individuals, companies or corporations, or their assigns, for the diversion of additional amounts of water from the said river or its tributaries to such amount, if any, as in connection with the amount diverted on the Canadian side, shall not injure or interfere with the navigable capacity of said river, or its integrity and proper volume as a boundary stream, or the scenic grandeur of Niagara Falls; and that the quantity of electrical power which may by permits be allowed to be transmitted from the Dominion of Canada into the United States shall be one hundred and sixty thousand horsepower: *Provided further*, That the said Secretary, subject to the provisions of section five of this act, may issue revocable permits for the transmission of additional electrical power so generated in Canada, but in no event shall the amount included in such permits, together with the said one hundred and sixty thousand horsepower and the amount generated and used in Canada, exceed three hundred and fifty thousand horsepower: *Provided always*, That the provisions herein permitting diversions and fixing the aggregate horsepower herein permitted to be transmitted into the United States, as aforesaid, are intended as a limitation on the authority of the Secretary of War, and shall in no wise be construed as a direction to said Secretary to issue permits, and the Secretary of War shall make regulations preventing or limiting the diversion of water and the admission of electrical power as herein stated; and the permits for the transmission of electrical power issued by the Secretary of War may specify the persons,



companies, or corporations by whom the same shall be transmitted, and the persons, companies, or corporations to whom the same shall be delivered.

"SEC. 4. That the President of the United States is respectfully requested to open negotiations with the Government of Great Britain for the purpose of effectually providing, by suitable treaty with said Government, for such regulation and control of the waters of Niagara River and its tributaries as will preserve the scenic grandeur of Niagara Falls and of the rapids in said river.

"SEC. 5. That the provisions of this Act shall remain in force for three years from and after date of its passage, at the expiration of which time all permits granted hereunder by the Secretary of War shall terminate unless sooner revoked, and the Secretary of War is hereby authorized to revoke any or all permits granted by him by authority of this act, and nothing herein contained shall be held to confirm, establish, or confer any rights heretofore claimed or exercised in the diversion of water or the transmission of power."

The third section provides a punishment for violations of the act, and the method of enforcing it.

The plain purpose of the act is to restrict, as far as lies in the power of the Congress, the diversion of the water from the Niagara River above the Falls in such a way as to reduce the volume of the water going over the Falls, and the plan of Congress in so doing is to effect this purpose of directly prohibiting the diversion of water on the American side, and by taking away the motive for diverting water on the Canadian side, by denying a market for electrical power generated on the Canadian side in the United States. The prohibition in the act is not absolute, however. It is clear that Congress wished, so far as it could, to accomplish its purpose with as little sacrifice of the pecuniary interests of those who had actually made investments, on the faith of the continued unrestricted diversion of water on the American side, or the continued unrestricted transmission of electrical power from Canada into the United States, as was consistent with the preservation of the integrity and volume of the Niagara River passing over the Falls.

The International Waterways Commission, a body appointed under a statute of the United States to confer with a similar body appointed under a statute of Canada to make recommendations with reference to the control and government of the waters of the Great Lakes and the valley of the St. Lawrence, have looked into the question of the amount of water which could be withdrawn on the American and the Canadian side of the Niagara River without substantial injury to the cataract as one of the great natural beauties of the world, and after a most careful examination they have reported, recognizing fully the necessity of preserving intact the scenic grandeur of the Niagara Falls, that it would be wise to restrict diversion to 28,600 cubic feet a second on the American side of the Niagara River (this to include 10,000 cubic second feet for the Chicago Drainage Canal), and to restrict the diversion on the Canadian side to 36,000 cubic feet a second. This report was in answer to a resolution of Congress calling for an expression of opinion, and thereupon Congress provided that the Secretary of War should be permitted, but not required, to issue permits in the first instance for the diversion of 15,600 cubic feet on the American side of Niagara River and the Erie Canal to persons or corporations actually engaged in the diversion of water and its use for power on that side for six months, with leave to increase the same after six months shall have shown the effect of such diversion, if it will not affect the scenic grandeur of the Falls. Congress further provided in the act, with reference to the power generated on the Canadian side, that the Secretary of War should be authorized, but not required, to issue permits for the transmission of 160,000 horsepower from the Canadian side to the markets of the United States, and then provided that he might issue revocable permits for the transmission of a larger amount, provided that the total amount transmitted, together with that generated and used on the Canadian side, should not exceed 350,000 horsepower, or the equivalent of the diversion from the falls of about 23,000 cubic feet of water.

I have already said that the object of the act is to preserve Niagara Falls. It is curious, however, that this purpose as a limitation upon granting of permits by the Secretary of War is only specifically recited in reference to his granting of permits for diversions of additional amounts of water over 15,600 cubic feet on the American side, which are to be limited to "such amount, if any, as, in connection with the amount diverted from the Canadian side, shall not interfere with the navigable capacity of said river or its integrity and proper volume as a boundary stream or the scenic grandeur of Niagara Falls." This peculiarity in the act is significant of the tentative opinion of Congress

that 15,600 cubic feet of water might be diverted on the American side and 160,000 electrical horsepower might be transmitted from the Canadian side without substantial diminution of the scenic grandeur of the Falls. Undoubtedly Congress left it to the Secretary to reduce this total thus indicated in the matter of permits if he differed with this intimation of the congressional view. Acting, however, upon the same evidence which Congress had, and upon the additional statement made to me at the hearing by Dr. John M. Clark, State geologist of New York, who seems to have been one of those engaged from the beginning in the whole movement for the preservation of Niagara Falls, and who has given close scientific attention to the matter, I have reached the conclusion that with the diversion of 15,600 cubic feet on the American side, and the transmission of 160,000 horsepower from the Canadian side, the scenic grandeur of the Falls will not be affected substantially or perceptibly to the eye.

With respect to the American Falls, this is an increase of but 2,500 cubic feet a second of what is now being diverted, and has been diverted for many years, and has not affected the Falls as a scenic wonder.

With respect to the Canadian side, the water is drawn from the river in such a way as not to affect the American Falls at all, because the point from which it is drawn is considerably below the level of the water at the point where the waters separate above Goat Island, and the waterways commission and Dr. Clark agree that the taking of 13,000 cubic feet from the Canadian side will not in any way affect or reduce the water going over the American Falls. The water going over the Falls on the Canadian side of Goat Island is about five times the volume of that which goes over the American Falls, or, counting the total as 220,000 cubic feet a second, the volume of the Horseshoe Falls would be about 180,000 cubic feet. If the amount withdrawn on the Canadian side for Canadian use were 5,000 cubic feet a second, which it is not likely to be during the three years' life of these permits, the total to be withdrawn would not exceed 10 per cent of the volume of the stream, and considering the immense quantity which goes over the Horseshoe Falls the diminution would not be perceptible to the eye.

I have given full hearing to the American Civic Association and to others interested in the preservation of the Falls, but nothing has been brought forward that really has any evidential force to affect the soundness of these conclusions.

By my direction, Capt. Charles W. Kutz, of the Corps of Engineers, United States Army, made an investigation into the circumstances of each corporation applying for permits for diversion or transmission. The subjects upon which Capt. Kutz was ordered to report are described in my memorandum opinion of July 14, 1906, as follows:

"It is necessary that the Secretary of War should know, before final action is taken by him, in the matter of permits for transmission, the capital already invested in the Canadian companies; the degree of completion of the plant; the amount likely to be sold on the Canadian side of the current; the time when the plant shall be ready for operation; the amount now actually produced; the amount now actually transmitted to the United States; the amount invested not only in the production of the current but in the plant and machinery for its transmission, including the poles and wires, and all the details; and also the capital invested by the American companies who are to receive in the first instance the current thus produced; the form in which that capital is, and the contracts into which they have entered, both with the Canadian companies and with the companies or persons to whom they expect to sell the current; the dates of these contracts, and all the circumstances tending to show the extent of the injury that a refusal to grant the permits requested would cause to the investment of capital, together with the question of when the contracts were made upon the claims for the use of current are based, with a view to determining the good faith with which these contracts were entered into; and whether the threatened passage of law induced their making."

Capt. Kutz has made a report both with respect to the companies applying for permits on the American side and those applying for permits on the Canadian side, and I wish to express my great satisfaction at the thoroughness and spirit of judicial fairness with which Capt. Kutz and those who are associated with him have done their work.

Taking up first the applications for permits for diversion on the American side, there is no room for discussion or difference. The Niagara Falls Power Co. is now using about 8,600 cubic feet of water a second and producing

about 76,620 horsepower. There is some question as to the necessity of using some water for sluicing. This must be obtained from the 8,600 cubic feet permitted, and the use of the water for other purposes when sluicing is being done must be diminished. The Niagara Falls Hydraulic Power & Manufacturing Co. is now using 4,000 cubic second-feet, and has had under construction for a period long antedating the Burton Act a plant arranged to divert 2,500 cubic second-feet and furnish 36,000 horsepower to the Pittsburg Reduction & Mining Co. A permit will therefore issue to the Niagara Falls Hydraulic Power & Manufacturing Co. for the diversion of 6,500 cubic second-feet, and the same rule must obtain as to sluicing, as already stated.

As the object of the act is to preserve the scenic beauty of Niagara Falls, I conceive it to be within my power to impose conditions upon the granting of these permits, compliance with which will remedy the unsightly appearance that is given the American side of the canyon just below the Falls on the American side where the tunnel of the Niagara Falls Power Co. discharges and where the works of the hydraulic company are placed.

The representative of the American Civic Association has properly described the effect upon the sightseer of the view toward the side of the canyon to be that of looking into the back yard of a house negligently kept. For the purpose of aiding me in determining what ought to be done to remove this eyesore, including the appearance of the buildings at the top, I shall appoint a committee consisting of Charles F. McKim, Frank D. Millet, and F. L. Olmsted to advise me what changes at an expense not out of proportion to the extent of the investment can be made which will put the side of the canyon at this point from bottom to top in natural harmony with the Falls and the other surroundings, and will conceal as far as possible the raw commercial aspect that now offends the eye. This consideration has been kept in view in the construction of works on the Canadian side and in the buildings of the Niagara Falls Power Co. above the Falls. There is no reason why similar care should not be enforced here.

Water is being withdrawn from the Erie Canal at the lake level for water-power purposes, and applications have been made for permits authorizing this. Not more than 400 cubic feet is thus used in the original draught of water that is not returned to the canal in such a way as not to lower the level of the lake. The water is used over and over again. It seems to me that the permit might very well be granted to the first user. As the water is taken from the canal, which is State property, and the interest and jurisdiction of the Federal Government grow out of the indirect effect upon the level of the lake, the permit should recite that this does not confer any right upon a consumer of the water to take the water from the canal without authority and subject to the conditions imposed by the canal authorities, but that it is intended to operate, and its operation is limited to confer, so far as the Federal Government is concerned, and the Secretary of War is authorized, the right to take the water and to claim immunity from any prosecution or legal objection under the fifth section of the Burton Act. I shall refer the form of the permit with these directions to the International Waterways Commission to prepare it.

I come now to the question of the permits to be granted to the applicants for the right to transmit electrical current from plants generating it on the Canadian side from the Niagara River.

The applicants are four: The International Railway Co., which applies for a permit for 8,000 horsepower; the Niagara, Lockport & Ontario Co., speaking in its own interest and that of the Ontario Power Co., for 90,000 horsepower; the Electric Transmission Co., speaking for itself and the Electrical Development Co., for 62,500 horsepower; and the Niagara Falls Power Co., speaking for the Canadian Niagara Power Co., for 121,500 horsepower.

Capt. Kutz recommended that the International Railway Co. be not granted any permit, but that out of the 160,000 horsepower 2,500 be reserved in order that it might be granted to the International Railway Co. when that company shall have obtained permission from the commissioners of the Queen Victoria Niagara Park to transmit the current through the park. The question of the company's right is pending before the Dominion Government. Some years prior to 1901 this railway company, which owns all the railways in Buffalo and neighboring cities and towns, bought a Canadian electric railway running from Chippewa to Queenstown, together with a bridge just below the Falls, and one at Lewiston, so as to make a loop with the railways on the American side. For this Canadian railway the applicant paid \$1,338,000.

It had a small power plant located in the Queen Victoria Park, and under its charter it could only use power generated therefrom to run the Canadian railway. In 1901 this charter was amended so as to permit the use of electricity for its railroads on both sides, and the plant has been developed by the expenditure of \$265,000, so that now it can generate 3,600 horsepower. The effective head is 68 feet, so that it takes about twice as much water to develop this power per horsepower as in the great plants I shall hereafter describe. It is quite clear that the original investment in the purchase of the railway was not made to secure the transmission of electric power across the boundary, because there was no power to do so under the charter. The subsequent investment of \$265,000 can perhaps be said to have been made with this in view. Capt. Kutz recommended that 2,500 horsepower be reserved for this company. The commissioners of Queen Victoria Park refused to approve the plans of this company for a transmitting line to the boundary, so that it can not now use the electricity except on the Canadian line, where it uses 1,200 horsepower. It generates now 3,600 horsepower. The permit of 2,500 horsepower would effect a saving of \$30,000 a year. The investment for transmission to the United States does not exceed \$265,000. All that can be reasonably expected from the outlay under the circumstances is not to exceed 7 per cent on the remainder, or about \$18,000. The permit should not, therefore, issue for more than three-fifths of 2,500 horsepower, or 1,500 horsepower. The fact that it may generate 8,000 horsepower by the expenditure of \$150,000 I do not regard as important, and I carry out the purpose of Congress in taking away any motive for making such an investment. The amount of 1,500 horsepower will be reserved to await the decision of the Dominion Government in the controversy between the International Railway Co. and the commissioners of Queen Victoria Park. This leaves out of the 8,000 horsepower 168,500 horsepower to be distributed to the other three companies. Let us consider their financial status and prospects.

The Ontario Power Co. was incorporated in 1887, and there was no limitation in its charter upon the amount of power which it might generate. Its plans, however, were subject to the approval of the commissioners of Queen Victoria Park, and plans for its works have been approved for 180,000 horsepower. The head works for this amount have been constructed and located above the first line of rapids. It was necessary under the plans to construct three conduits through the park. Only one of these conduits has been constructed, and it has a capacity to supply six generating units, three for 10,000 horsepower each and three for 12,000 each, or 66,000 horsepower in all. The cost to complete the six units and thus produce 66,000 is \$6,500,000. The amount required to complete the plant to the projected size, producing 180,000 horsepower, would be \$6,500,000 additional; and the amount required to produce 120,000 horsepower would be about \$3,200,000. In addition to this, the Ontario Transmission Company, an ancillary company to the main power company, has expended about \$1,000,000 in transmission, right of way and plant, and the power company has entered into contracts for the furnishing of 6,000 horsepower, with an option by the purchasers to increase this to 12,000 for Canadian consumption. The Niagara, Lockport & Ontario Co. of New York is affiliated with the Ontario Power Co., and has constructed a very elaborate transmission plant from the international boundary to Lockport, from Lockport to Buffalo, and from Lockport by way of Rochester to Syracuse. It has expended \$2,785,000, of which \$1,200,000 was for right of way and \$1,162,000 for construction. Its capacity for transmission from the international boundary to Lockport is 60,000 horsepower, and there is the same capacity from Lockport to Buffalo; from Lockport to Syracuse it has a capacity of 10,000 horsepower, and a second line of greater capacity is under construction. It claims that its investment will amount, when its transmission lines are completed, to upward of \$4,000,000, and certainly the expenditure will reach \$3,000,000.

The Electrical Development Co. received a charter, 5 Edward VII, and was authorized to take 125,000 horsepower, or 8,000 cubic feet a second. The head-works, wheel pit, and tail race have been completed for 11 units of 12,500 horsepower each. The power house has been completed for seven units, but the machinery installed and contracted for is only for four units. The completion of the four units will involve the expenditure of \$6,300,000, and it may be increased to 11 units, or 182,000 horsepower, by the expenditure of \$1,756,000. This company has erected a transmission plant to Toronto which will convey 20,000 horsepower and that will involve an expenditure when completed of \$2,610,000. The demands for Canadian consumption which this company will satisfy are about 30,000 horsepower. There is an electrical transmission com-

pany of American origin and charter affiliated with this company which has expended about \$246,000 and has a relation to what is called the Nicholls syndicate, which owns interests in gas and power companies and in an electric railway company from Buffalo to Rochester which is under construction. It has franchises in its own name in seven towns and cities, but the enterprise is largely inchoate and the investment is in prospect rather than actual.

The Canadian Niagara Power Co. was organized in 1892 by the same persons who were interested in the Niagara Falls Power Co., the pioneer of electrical power companies on the American side. It is not limited in the quantity of power which it is to use, and its plans are subject to the approval of the commissioners of the Queen's Park. Plans have been approved for 120,000 horsepower, which means 11 units of 11,000 horsepower, with one of these as a "spare," which makes its normal capacity 110,000. Its headworks, wheel pits, and tailrace tunnel are completed for the full development. Five units have already been installed and its power house and transformer have been completed for five units. It has cost \$5,550,000, and to make 11 units would cost \$1,250,000 more. It has an underground conduit connecting the Canadian plant with the American plant of the Niagara Falls Power Co., with a capacity of 128,000 horsepower transmission, with cables in it of the capacity of 32,000. It has a separate transmission line 16 miles along the Niagara River to Fort Erie, with towers to carry the lines across the river, all of which transmission plant cost \$434,000. It sells in Canada 1,340 horsepower, with an option to purchasers to take 4,237 horsepower.

From what has been said it will be seen that the Ontario Power Co. has now invested or under contract \$6,500,000, which will produce 66,000 horsepower; that it and its affiliated companies have expended \$1,000,000 for transmission in Canada, and about \$3,000,000 for transmission in the United States.

That the Electrical Development Co. has invested \$6,300,000, which will produce 50,000 horsepower; and a transmission line in Canada of \$2,500,000, and perhaps \$300,000 in transmission lines in the United States.

That the Canadian Niagara Power Co. has invested \$5,350,000, which will produce 55,000 horsepower, and \$500,000 in transmission lines in the United States.

Capt. Kutz recommended the allowance to the Ontario Power Co. of a permit for 60,000 horsepower; to the Canadian Niagara Falls Power Co. the same amount, 60,000 horsepower; to the Electrical Development Co. 37,500.

I think the Ontario Co. is entitled to a larger allowance than the other two companies, because it generates 11,000 horsepower more than the Canadian Niagara Falls Co., and 16,000 horsepower more than the Electrical Development Co. It has invested \$200,000 more in its power plant than the Electrical Development Co. and \$1,000,000 more than the Canadian Niagara Falls Co. It uses for the production of one unit of horsepower perhaps 15 per cent less of water than the other two companies. But more than all, it has expended \$3,000,000 in a transmission line from the international boundary to Rochester, Syracuse, Lockport, and Buffalo. This investment is almost wholly dependent for use and profit on the importation of electricity from Canada. Capt. Kutz reports that 60,000 horsepower will enable the company to secure a reasonable return on the transmission investment after paying a proper amount for the power at the boundary. This would leave to be divided between the other two companies 99,000 horsepower, and objection is made to this discrimination against them in favor of the Ontario Power Co. because their plants are so arranged that by the expenditure of a million and a quarter the Niagara Co. could increase its output to 110,000 horsepower, and by the expenditure of a million and a half the Development Co. could increase its output to 130,000 horsepower, whereas the Ontario Co. must expend \$6,500,000 more to reach its full capacity of 180,000 horsepower, or about \$3,200,000 to reach a capacity of 130,000 horsepower. While this circumstance is entitled to some weight against proportioning the allowances to the capital actually expended on the power plants or the horsepower now produced from the present installations, still I think the considerations already suggested, especially the special expenditure for long distance transmission, really outweigh everything else in requiring that if possible a sufficient amount be allowed to pay a reasonable profit on that investment, which is wholly dependent on transmission.

Coming now to the division between the Niagara Falls Co. and the development company, the conclusion is not so easy. The development company has invested about three-quarters of a million more on its power plant than the Niagara Co., but under its present installation it can not produce as much horsepower by 5,000. It has expended \$2,500,000 to carry 20,000 horsepower to

Toronto and has contracts for 10,000 more. The Canadian business does not pay as well as the American business, especially that of the Niagara Co., which is quite profitable under its existing contracts. Considering these contracts, it seems to me that with its slight cost of transmission and the advantageous situation that it enjoys in respect to its affiliated American company, an allowance of 52,500 horsepower for the Niagara Co. will enable it to fulfill all its probable demands at a good profit. The works across the river produce 76,300 horsepower, and adding 52,500 horsepower makes 128,800 horsepower. The American company now earns 9 per cent on its stock of \$4,000,000 and interest on a bonded indebtedness of \$19,000,000. It has contracts requiring a maximum of 102,000 horsepower, but the call on its capacity has never exceeded 85,000 horsepower, because the calls do not coincide. On the capital invested, there is no likelihood that the Niagara Co. will suffer a loss. It will not make as much as it would have made had it been allowed to transmit its full capacity after building the contemplated additions to its installation, but the act only intended to save the investors from losses on the plant actually invested, not to compensate them for prospective gain.

This leaves for the Electrical Development Co. 46,000 horsepower to transmit to the United States after producing 80,000 horsepower and transmitting it to Toronto and elsewhere. This would justify the company in increasing the number of units in its installation if it could secure transmission to the United States. It is probable that the amount is not enough to justify the elaborate outlay required for transmission to American customers, and this reduces the value of the permit; but I can not think that it will not be able to arrange for the disposition of transmissible current at the boundary at such figures as to be profitable, even if the amount it makes per horsepower be less than that which the two American companies realize, because of their greater facility for reaching customers, the one through the Rochester transmission plant and the other through the American Niagara Co.'s plant and good will. Under this arrangement and allotment the Canadian Co. becomes the only one which, assuming a demand for its American delivery, will be justified in increasing the capacity of its power plant by installing more units. The demand in Canada for the product of the Ontario and Niagara companies may grow some, but not very much, so that they are likely to be confined to their present installation.

Before closing I ought to notice a claim of the Niagara Co. that it has by its charter a preferential right over the other two companies, so that it ought to be allowed its full 110,000 horsepower for transmission before the other two companies receive permits to transmit any current at all. The preference claimed is really only a priority in taking water from the river, and can not be reasonably extended to apply to rights to transmit current where there is no lack of water for all.

The Niagara Falls Power Co. and its Canadian other self ask that the two permits to them shall contain a provision by which in case of a reduction of the amount of water diverted on the American side below the permitted limit, a corresponding increase beyond the limit permitted on the Canadian side may be authorized. This privilege must be denied. The American diversion and the Canadian transmission must be kept separate in the permits and should be absolute and not variable. It would form an uncomfortable precedent in other cases.

It has been asserted by persons who profess to have information that the three companies here seeking permits are looking forward to an amalgamation of interests or a combination for the purpose of keeping up the prices of electrical power by avoiding competition that will deny to the public the benefit it is entitled to enjoy from the natural water power that these companies use at comparatively small benefit to any one of the Governments which authorize its use. This is denied by the applicants. Just what effect the existence of such a combination ought to have to require a revocation or modification of these permits is a matter of grave doubt, but should evidence in proper form of the existence of such combination be brought to me as a ground for the modification of the action now taken, it will be given careful consideration.

The order for permits will, therefore, be for—

The International Ry. Co.....	1,500
The Ontario Power Co.....	80,000
The Canadian Niagara Falls Power Co.....	52,500
The Electrical Development Co.....	46,000

The Chief of Engineers and Capt. Kutz will prepare the permits after consultation with counsel for the respective companies. An order should also be entered detailing Capt. Kutz to report a plan for the supervision of the operation of these companies under the permits, with a view to secure strict compliance with their terms.

W. H. TAFT,  
Secretary of War.

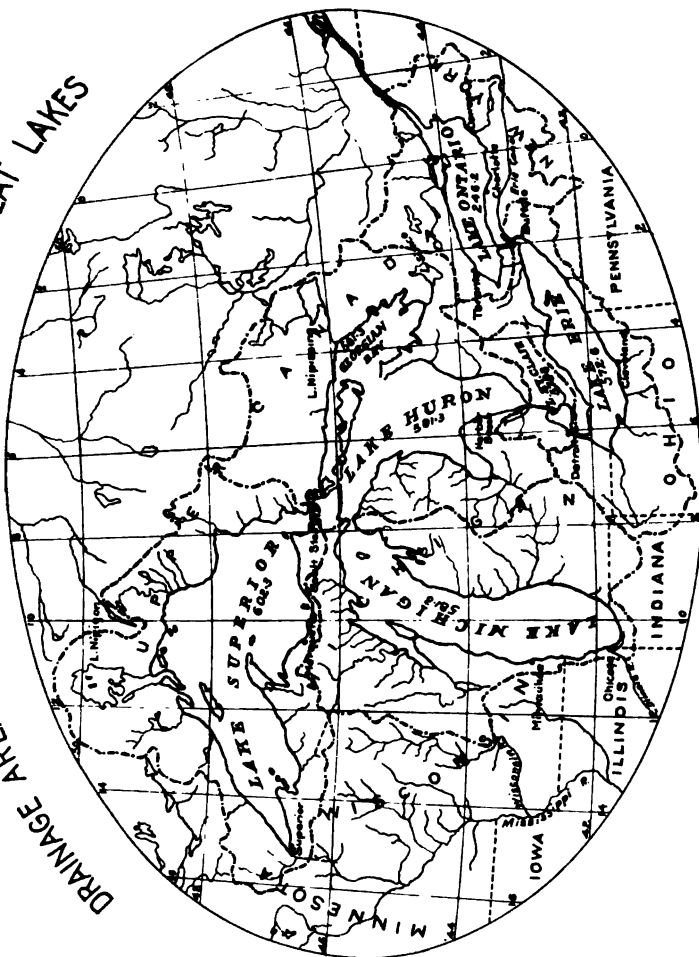
JANUARY 18, 1907.

A BILL For the control and regulation of the waters of Niagara River, for the preservation of Niagara Falls, and for other purposes.

*Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,* That the diversion of water from Niagara River or its tributaries, in the State of New York, is hereby prohibited, except with the consent of the Secretary of War as hereinafter authorized in section two of this Act: *Provided*, That this prohibition shall not be interpreted as forbidding the diversion of the waters of the Great Lakes or of Niagara River for sanitary or domestic purposes, or for navigation, the amount of which may be fixed from time to time by the Congress of the United States or by the Secretary of War of the United States under its direction.

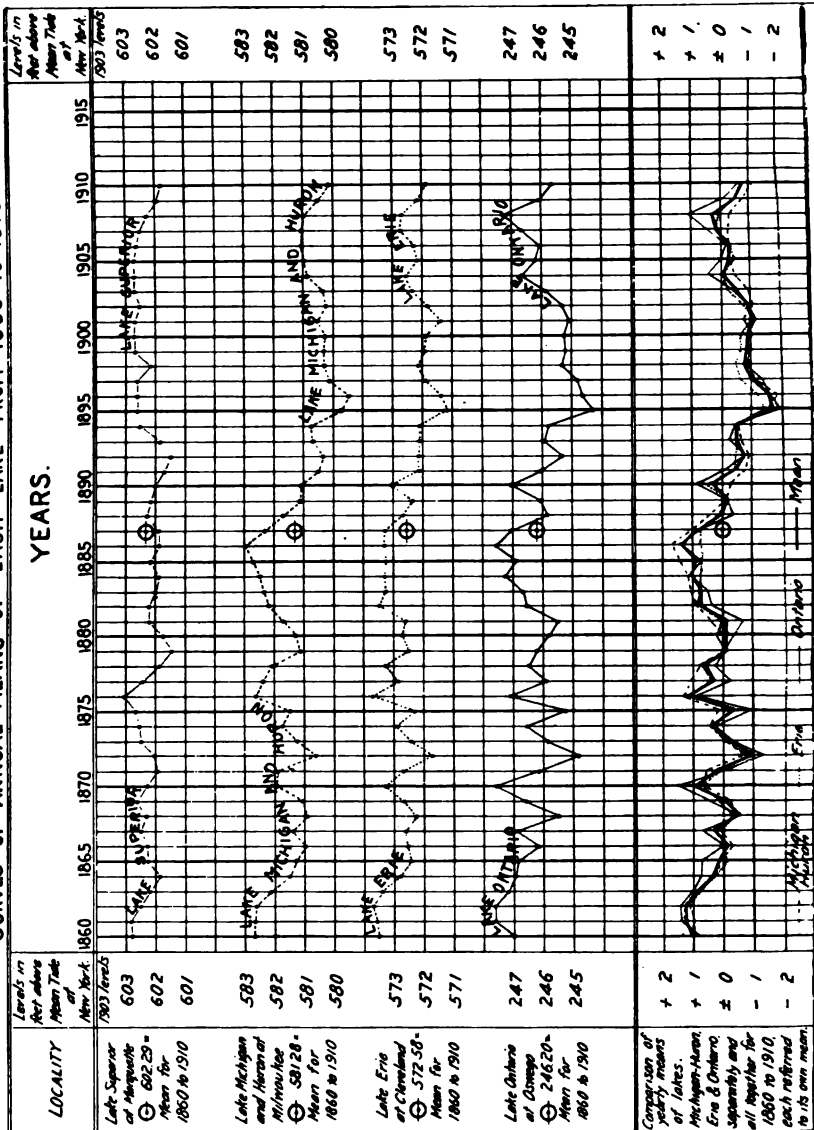
SEC. 2. That the Secretary of War is hereby authorized to grant permits for the diversion of water in the United States from said Niagara River or its tributaries for the creation of power to individuals, companies, or corporations which are now actually producing power from the waters of said river, or its tributaries, in the State of New York, or from the Erie Canal; also permits for the transmission of power from the Dominion of Canada into the United States, to companies legally authorized therefor, both for diversion and transmission, as hereinafter stated, but permits for diversion shall be issued only to the individuals, companies, or corporations as aforesaid, and only to the amount now actually in use or contracted to be used in factories the buildings for which are now in process of construction, not exceeding to any one individual, company or corporation as aforesaid a maximum amount of eight thousand six hundred cubic feet per second, and not exceeding to all individuals, companies or corporations as aforesaid an aggregate amount of fifteen thousand six hundred cubic feet per second; but no revocable permits shall be issued by the said Secretary under the provisions hereafter set forth for the diversion of additional amounts of water from the said river or its tributaries until the approximate amount for which permits may be issued as above, to wit, fifteen thousand six hundred cubic feet per second, shall for a period of not less than six months have been diverted from the waters of said river or its tributaries, in the State of New York: *Provided*, That the said Secretary, subject to the provisions of section five of this Act, under the limitations relating to time above set forth is hereby authorized to grant revocable permits, from time to time, to such individuals, companies, or corporations, or their assigns, for the diversion of additional amounts of water from the said river or its tributaries to such amount, if any, as, in connection with the amount diverted on the Canadian side, shall not injure or interfere with the navigable capacity of said river, or its integrity and proper volume as a boundary stream, or the scenic grandeur of Niagara Falls; and that the quantity of electrical power which may by permits be allowed to be transmitted from the Dominion of Canada into the United States, shall be one hundred and sixty thousand horsepower: *Provided further*, That the said Secretary, subject to the provisions of section five of this act, may issue revocable permits for the transmission of additional electrical power so generated in Canada, but in no event shall the amount included in such permits, together with the said one hundred and sixty thousand horsepower and the amount generated and used in Canada, exceed three hundred and fifty thousand horsepower: *Providing always*, That the provisions herein permitting diversions and fixing the aggregate horsepower herein permitted to be transmitted into the United States, as aforesaid, are intended as a limitation on the authority of the Secretary of War, and shall in no wise be construed as a direction to said Secretary to issue permits, and the Secretary of War shall make regulations preventing or limiting the diversion of water and the admission of electrical power as herein stated; and the permits for the transmission of electrical power issued by the Secretary of War may specify the persons, companies, or corporations by whom the same shall be transmitted, and the persons, companies, or corporations to whom the same shall be delivered.

# DRAINAGE AREAS AND SURFACE LEVELS OF THE GREAT LAKES 1860 TO 1910.



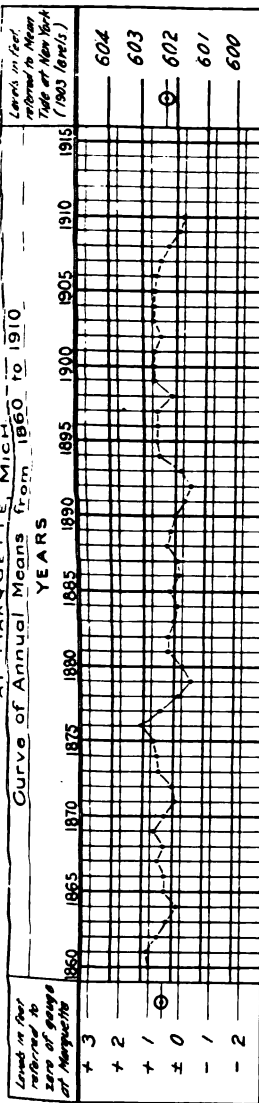


# **SURFACE LEVELS OF THE GREAT LAKES** **CURVES OF ANNUAL MEANS OF EACH LAKE FROM 1860 TO 1910.**



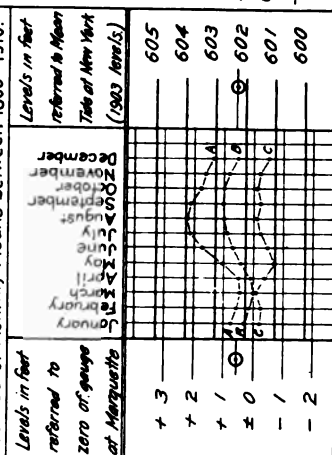
Under direction of Brigadier General W. H. Bixby, Chief of Engineers, Washington, D. C. November, 1911  
 Drawn in Office of U. S. Lake Survey Based upon Records of the Lake Survey and other U. S. Engineer Offices

# SURFACE LEVELS OF LAKE SUPERIOR AT MARQUETTE, MICH.



Zero of Marquette gauge = 601.75 above New York (U.S. Lake Survey level adjustment of 1903.)  
 Mean level for 1876 or highest annual mean = 603.06. Highest monthly mean = 604.08, Sep 1889.  
 " " 1879 " lowest " = 601.43. Lowest " = 600.76, Feb 1871  
 " " Averages for 51 years or for 1860 to 1910 incl. = 602.29 (see ⊕ in side columns.)

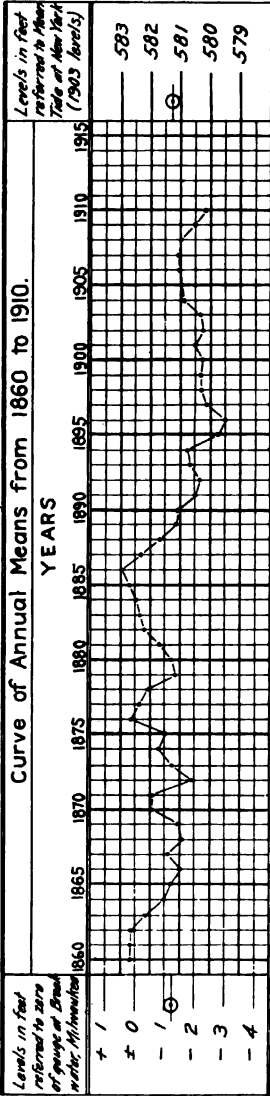
## Curves of Monthly Means between 1860-1910.



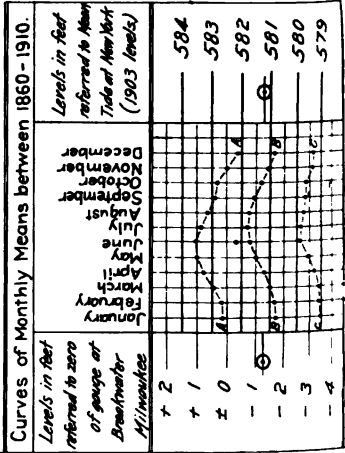
A - Curve of 1876 or year of highest annual mean  
 B - " " averages for 51 years, 1860 to 1910.  
 C - " " 1879 or year of lowest annual mean.  
 ⊕ Represents the Average for 51 years, 1860 to 1910 incl. = 602.29.

Under direction of Brigadier General W. H. Bixby, Chief of Engineers, Washington, D.C. November, 1911.  
 Drawn in Office of U.S. Lake Survey. Based upon Records of the Lake Survey and other U.S. Engineer Offices.

# **SURFACE LEVELS OF LAKE MICHIGAN** **AT MILWAUKEE, WIS.**

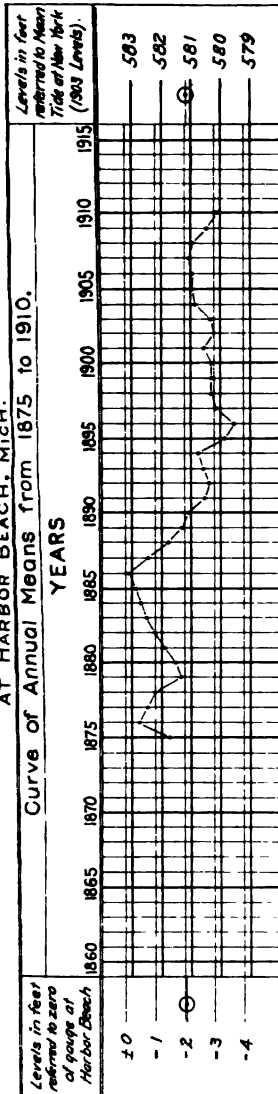


Zero of Milwaukee gauge = 582.53 above New York (U.S. Lake Survey level adjustment of 1903.)  
 Mean level for 1886 or highest annual mean = 582.96. Highest monthly mean = 583.57 June 1886.  
 " " " 1896 " lowest " = 579.47 Lowest " = 578.98 Dec. 1895.  
 " " " Averages for 51 years or for 1860 to 1910 incl. = 581.28. (see  $\ominus$  in side columns.)

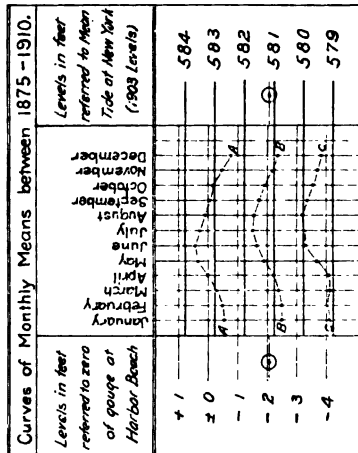


A = Curve of 1886 or year of highest annual mean.  
 B = " " averages for 51 years 1860 to 1910.  
 C = " " 1896 or year of lowest annual mean.  
 $\ominus$  Represents the Average for 51 years, 1860 to 1910 incl. = 581.28.

# SURFACE LEVELS OF LAKE HURON AT HARBOR BEACH, MICH.



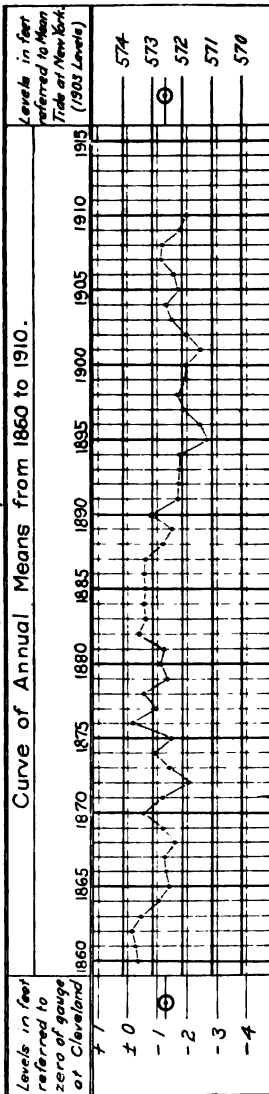
Zero of Harbor Beach gauge = 583.21 above New York. (U.S. Lake Survey level adjustment of 1903.)  
Mean level for 1886 or highest annual mean = 583.08 Highest monthly mean = 583.66. July 1876.  
" " " 1896 or lowest " = 579.53 Lowest " = 579.02. Dec. 1895.  
" " " Averages for 36 years or for 1875 to 1910 incl. = 581.19 (See - in side columns.)



A = Curve of 1886 or year of highest annual mean.  
B = " " Averages for 36 years, 1875 to 1910.  
C = " " 1896 or year of lowest annual mean.  
- Represents the average for 36 years, 1875 to 1910 incl. = 581.19.

Under direction of Brigadier General W. H. BIXBY, Chief of Engineers, Washington, D.C., November, 1911.  
Drawn in Office of U.S. Lake Survey. Based upon Records of the U.S. Lake Survey and other U.S. Engineer Offices.

# SURFACE LEVELS OF LAKE ERIE AT CLEVELAND, OHIO.

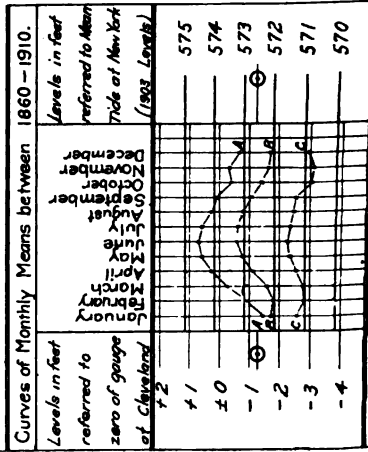


Zero of Cleveland Gauge 573.82 above New York (U. S. Lake Survey Levels of 1903.)

Mean Level for 1876 or Highest Annual Mean = 573.70. Highest Monthly Mean = 574.52 June, 1876.

" " 1895 " Lowest " = 572.17. Lowest " " = 570.70 Nov., 1895.

" " Averages for 51 Years or for 1860 to 1910 incl. 572.58 (see ⊕ in Side Columns.)



A = Curve of 1876 or of highest annual mean.

B = " " Averages for 51 years 1860 - 1910.

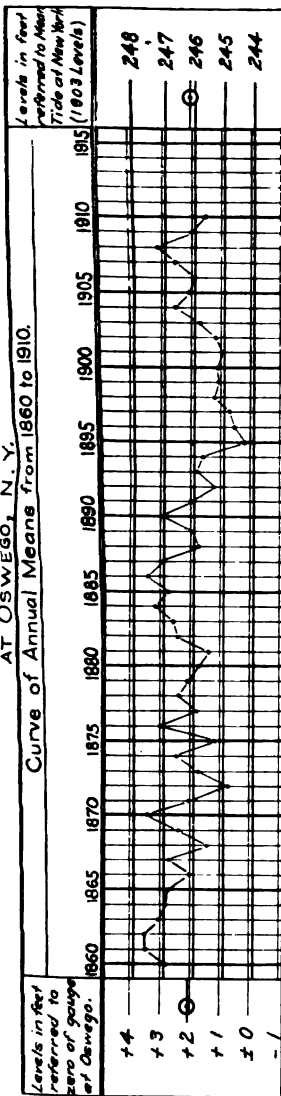
C = " " 1895 or of lowest annual mean.

⊕ Represents the Average for 51 years, 1860 to 1910 incl. = 572.58.

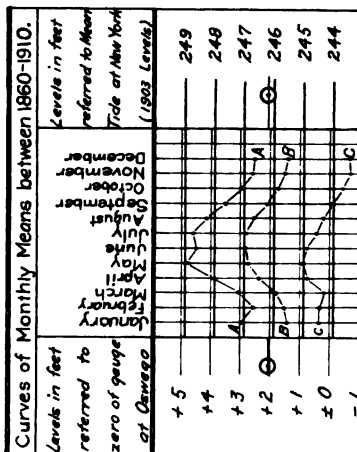
Under direction of Brigadier General W. H. BIXBY, Chief of Engineers, Washington, D.C. November, 1911.

Drawn in Office of U.S. Lake Survey, Based upon Records of the U.S. Lake Survey and other U.S. Engineer Offices.

# SURFACE LEVELS OF LAKE ONTARIO AT OSWEGO, N. Y.



Zero of Oswego Gauge 244.12 above New York (U.S. Lake Survey level Adjustment of 1903.)  
 Mean Level for 1862 or Highest Annual Mean = 247.63. Highest Monthly Mean = 248.95, May, 1870.  
 " " 1895 = Lowest " = 244.29, Lowest " = 243.41, Nov. 1895.  
 " " " Averages for 51 years or for 1860 to 1910 incl. = 246.20 (see ⊕ in Side Columns.)



A = Curve of 1862, or year of highest annual mean.  
 B = " " Averages for 51 years, 1860 to 1910.  
 C = " " 1895, or year of lowest annual mean.  
 ⊕ Represents the Average for 51 years, 1860 to 1910 incl. = 246.20.

Under direction of Brigadier General W. H. Bixby, Chief of Engineers, Washington, D. C., November, 1911.  
 Drawn in Office of U.S. Lake Survey. Based upon Records of the U.S. Lake Survey and other U.S. Engineer Offices.



SEC. 3. That any person, company, or corporation diverting water from the said Niagara River or its tributaries, or transmitting electrical power into the United States from Canada, except as herein stated, or violating any of the provisions of this act, shall be deemed guilty of a misdemeanor, and on conviction thereof shall be punished by a fine not exceeding two thousand five hundred dollars nor less than five hundred dollars, or by imprisonment (in the case of a natural person) not exceeding one year, or by both such punishments, in the discretion of the court. And, further, the removal of any structures or parts of structures erected in violation of this act, or any construction incidental to or used for such diversion of water or transmission of power as is herein prohibited, as well as any diversion of water or transmission of power in violation hereof, may be enforced or enjoined at the suit of the United States by any circuit court having jurisdiction in any district in which the same may be located, and proper proceedings to this end may be instituted under the direction of the Attorney General of the United States.

SEC. 4. That the President of the United States is respectfully requested to open negotiations with the Government of Great Britain for the purpose of effectually providing, by suitable treaty with said Government, for such regulation and control of the waters of Niagara River and its tributaries as will preserve the scenic grandeur of Niagara Falls and of the rapids in said river.

SEC. 5. That the provisions of this act shall remain in force for three years from and after date of its passage, at the expiration of which time all permits granted hereunder by the Secretary of War shall terminate unless sooner revoked, and the Secretary of War is hereby authorized to revoke any or all permits granted by him by authority of this act, and nothing herein contained shall be held to confirm, establish, or confer any rights heretofore claimed or exercised in the diversion of water or the transmission of power.

SEC. 6. That for accomplishing the purposes detailed in this act the sum of fifty thousand dollars, or so much thereof as may be necessary, is hereby appropriated from any moneys in the Treasury not otherwise appropriated.

SEC. 7. That the right to alter, amend, or repeal this act is hereby expressly reserved.

Approved, June 29, 1906.

Maj. LADUE. There is another matter that I feel some hesitancy in touching on, since it affects only the scenic beauty of the Falls and vicinity, which is a subject not altogether in my line. In granting these permits in 1907 the Secretary of War incorporated in them certain conditions as to the restoration of the scenic beauty of the Falls and the Gorge. I may say that these conditions have been fully and wholly lived up to by the power companies. They have done everything that the War Department has asked them to do in this matter. To assist him in deciding what these conditions should be and what the companies should do, the Secretary of War engaged the services of several eminent artists and others under the designation of the Niagara Falls committee. The report of that committee is in this document (H. Doc. No. 246). It appears to me desirable, although I have no instructions from the Secretary of War to this effect, that in the legislation that is adopted there should be some provision which will justify continuing this committee in existence, or at least that it be so drawn as to not legislate the committee out of existence.

The CHAIRMAN. Are these commissioners paid by the Government now?

Maj. LADUE. There have been some fees paid to certain of the members of the committee for particular services. Their service on this committee is a work of love to a certain extent, and on account of the fact that they are very much interested in this subject, the fees that they are satisfied to receive are very much less than the fees they would receive for any such services in other employments, but they do receive small fees for their attendance on the committee.



Mr. KENDALL. About how many, Major, constitute this committee?

Maj. LADUE. I believe there are four.

Mr. GARNER. That is not the National Waterways Committee, is it?

Maj. LADUE. No, sir.

Mr. FOSTER. What are their names?

Maj. LADUE. Their names are: Mr. Frank D. Millet, Mr. Frederick Law Olmstead, Maj. John S. Sewell, and Maj. Charles Keller. Maj. Keller was appointed in place of Mr. McKim, who died.

Mr. GARNER. Could you estimate, Major, how much this committee has gotten up to date?

Maj. LADUE. The total expenditure on account of the committee, including expenses of every kind, from 1907 to date, has been \$3,627.80.

The CHAIRMAN. Major, will you be good enough to be here next Tuesday morning?

Maj. LADUE. Yes, sir. I shall be pleased to do so.

Mr. GARNER. Major, with the permission of the chairman, I want to say I believe it was yesterday, or the day before, there was some discussion about a permit that has not been utilized. Have you any additional information about that matter that you could give to the committee?

Maj. LADUE. I know nothing further than I knew the other night. In what particular?

Mr. GARNER. Well, if I could, I would like to have some reason given to the committee why a permit has been in existence for five years, and the company to which the permit was given has not utilized it to bring power into the United States. The permit has only been utilized by other companies to the extent of 10,000 or 12,000 horsepower, whereas it appeared from the statements of the gentlemen from Windsor, Ontario, that applications are now on file with the War Department asking for 25,000 horsepower to go into Detroit, Mich., and that application had been refused on the ground that the full extent of the permit had been already granted.

Maj. LADUE. The Burton law was limited by its terms to three years. It authorized the Secretary of War to grant permits for certain things—for the diversion of a certain amount of water and for the importation of a certain amount of power. In addition to these specified amounts, it authorized the Secretary of War, under certain specific conditions, to grant additional revocable permits for importation of additional power. I was not connected with this work at the time, but I presume that it has been generally considered that these permits, which were granted after a very thorough investigation and consideration of the claims of the various companies, were intended to remain in force as long as the Burton law remained in force, unless there should be some very good and compelling reason for their revocation. As I say, I give that as my view of the matter, but as far as I know the question has not been raised until this hearing. The Burton law has been extended two or three times, until now it has been over four years since these permits were originally granted, but I presume the same thought has been in the minds of those who have had to do with this matter, that it was the probable intent of the Burton law, as well as the intent of the permits given under that law, that these permits should last as long as the Burton law lasted, unless some good reason for their revoca-

tion should appear. So far as I know, there has been no question as to this permit of the Electrical Development Co. until recently.

Last year, in 1911, this Detroit company applied for a permit to transmit additional power into the United States at Detroit. They were told that the full amount of the 160,000 horsepower authorized by the Burton law was covered by existing permits. They were also told that there was a provision in the Burton law by which additional revocable permits might be granted under certain conditions specified. Those conditions were, as we informed the company, first, that such permits must be granted to companies legally authorized to do the business which they proposed to do; second, that the sum total of all permits for importation of power, including the 160,000 horsepower already spoken of, and all power generated and used in Canada, should not exceed 350,000 horsepower. We also told them,—and this is not in the Burton law, but is based on the treaty—that they would also be required to show that this additional power which they desired to import could be obtained without increasing the diversions on the Canadian side above 36,000 feet per second.

The representative of the company is not here and I am not conversant with the motives of the company, but they dropped the matter at the time. The Burton Act, of course, was about to expire, and that fact may have had some influence on their action, but I am unable to say. At any rate, they dropped the matter at the time. Recently, however, they have renewed their application for a permit for transmission of this additional power. With this new application they have given us the information that we asked for. They have shown us that they are legally authorized to do the business. They have shown us copies of their charter and contracts for the power. They have given us figures, which are verified by our records, showing that the 350,000 horsepower limit of the Burton Act will not be exceeded. They have also given us figures, which are verified by our records, showing that the diversion will not exceed the legal limit in Canada. The matter now becomes one of policy. Legally the permit can be granted. The question of policy rests with the Secretary of War, and is under consideration now.

Mr. GARNER. Has any other company applied for a permit to bring power in from Canada?

Maj. LADUE. I recall no recent application from any other company. Some years ago there were some applications, but as I recall the matter none of them came to the point of being formally acted upon by the Secretary of War.

Mr. GARNER. In construing the Burton act as giving a permit permanency during its life, if it were shown to you and to the War Department that the company that had the permit was not using it, would you still think that the Burton act contemplated, because you issued that permit, that you must keep it in existence during the life of that law to the exclusion of others?

Maj. LADUE. Not at all. I consider that if such a matter were formally presented it would be a question for consideration; and if the case were strong enough, if a proper case were made out, I would consider that under the law the permit might be revoked. There is no doubt that the permit is subject to revocation at any time under the act. It simply becomes a question of policy.

Mr. GARNER. And then it resolves itself into a question of whether it would be proper policy for the Government to revoke a permit and grant it to someone else?

Maj. LADUE. That is as I understand the matter.

Mr. GARNER. There is one company to which a permit was granted five years ago that has never utilized this permit as to selling its power, but another company has been importing it into the United States.

Maj. LADUE. There is one which is not now utilizing its permit.

Mr. COOPER. What company is that?

Mr. LADUE. The Electrical Development Co.

Mr. COOPER. Where did it get its charter?

Maj. LADUE. The Electrical Development Co. is a Canadian corporation which develops power. Of course, the permit is not granted to the Electrical Development Co., but to its associates on this side.

Mr. COOPER. Who are they?

Maj. LADUE. The Cataract Power & Conduit Co. of Niagara Falls and to the Niagara Falls Electrical Transmission Co., and to such other distributing agents as the Electrical Development Co. may designate.

Mr. HARRISON. Their charter was granted in 1903?

Maj. LADUE. Investigations before the permit was given showed that the company on the American side had gone to some expense to prepare its plant for the utilization of the power, and that at that time they were as much entitled to it as anybody else. Why they have not utilized it I do not know.

Mr. GARNER. Major, do you know the officers and members of that company? Have you a record of them?

Maj. LADUE. We can certainly get it if we have not got it.

Mr. KENDALL. Gen. Greene, do you know who they are?

Gen. GREENE. The permit gives the right to the Electrical Development Co. and to all the companies to whom they see fit to sell it. That is in the reports of the War Department, is it not? The permit reads as follows:

AUGUST 17, 1907.

To the Niagara Falls Electrical Transmission Co., and to the Cataract Power & Conduit Co., and to such other distributing agents of companies in the United States as the Electrical Development Co. of Ontario (Ltd.) may designate to receive from the said Electrical Development Co. of Ontario (Ltd.) at the international boundary line and to transmit into the United States 46,000 electrical horsepower, provided that a part of such electrical power may be received by the Cataract Power & Transmission Co., at the international boundary over the power transmission lines of the Canadian Niagara Power Co., and that the remaining part of such electrical power may be transmitted into the United States over transmission circuits thereafter to be approved by the Chief of Engineers, and may be received by the said Niagara Falls Electrical Transmission Co., or such distributing agents or companies in the United States as the said The Electrical Development Co. of Ontario (Ltd.) may designate.

Mr. GARNER. I believe you have purchased some power from this company that had the permit?

Gen. GREENE. Never; except one or two hours in the winter when our manufacturing load was a little more than our powerhouse could take care of.

Mr. GARNER. Who did purchase this power? Do you know?

Gen. GREENE. Well, it is common report that the Cataract Power & Conduit Co., of Buffalo, is purchasing power from them. That

contract was made public in reports of the Canadian park commissioners. It ran, as I recall, for three years, from 1907 to 1910, and was for one unit or such part of it as the Cataract Power & Conduit Co., of Buffalo, might wish to use, the maximum power of the unit being about 12,000 horsepower.

Mr. GARNER. Do you remember anything, General, about what price the contract for that power called for? You stated that the contract was made public?

Gen. GREENE. I was not strictly accurate. A reference to the contract was made public. I never saw the price and I do not know what it was.

Mr. GARNER. You do not know where we could get information as to the price they paid for this power?

Gen. GREENE. I do not know except from the officers of the Cataract Power & Conduit Co., or the officers of the Buffalo Electrical Development Co.

Mr. GARNER. I was speaking about any one in this city?

Gen. GREENE. I do not think the War Department has it.

You asked me, I think, as to the officers. The report further says: The Electrical Development Co., under a contract which expired June 20, 1911, formerly transmitted power to Terminal B station at Buffalo in parallel with the Canadian Niagara Power Co. The load was continuous, being the peaks for short periods of the day only. These peaks reached a maximum of 1,000 to 10,000 horsepower. Since the expiration of the contract no power has been exported from the plant of the Electrical Development Co.

No contract has been made with the Electrical Development Co. since the expiration of this contract.

You asked me as to officers of this company; they live in Toronto, Canada, and are as follows: Mr. Robert J. Fleming is the general manager; I think Sir William McKenzie is president, but am not perfectly sure; he is the principal owner.

Mr. GOODWIN. It is ascertained that after a life of 50 years one of these leases had expired and was renewed for 999 years; now is that correct?

Gen. GREENE. I think it is a little in error, sir. I think it said that the charter of a New York corporation which originally ran for 50 years had been extended to 999 years. Was not that it?

Mr. GOODWIN. Well, possibly it was in that form. Well, now, is that charter irrevocable if it should be ascertained, if we could ascertain the quantity of water that would flow from the cataract?

Gen. GREENE. I do not know as to the company; I can tell you as to the charters of the companies I am connected with. The contracts with the Park Commissioners, including the right to occupy their land and use the water going past their lands, in which they are riparian owners, run for 50 years beginning with 1900, together with three renewals of 20 years each, at a price to be agreed upon in each case, or settled by arbitration. The price for the first fiscal year is fixed.

Mr. GOODWIN. It seems to me it would be contrary to public policy to make a renewal of such extended length as practically 1,000 years.

Gen. GREENE. That is the charter, the right to do business; but the contract I speak of, or the right to take the water on the Canadian side, is 50 years, with the privilege of three renewals of 20 years each.

Mr. GOODWIN. What is it on the American side?

Gen. GREENE. On the American side the charter is perpetual, but they claim the right of ownership in the riparian rights to the waters of Niagara Falls, just the same as in the ownership of their land.

Mr. BROWN. That is covered under the New York laws.

The CHAIRMAN. You can proceed, Maj. Ladue.

Maj. LADUE. I have nothing more to say, unless the committee desires to ask me any questions.

Mr. GARNER. Major, have we any way, if I understand Gen. Greene's and your statements, of ascertaining the compensation that this electrical company that had the permit to import the power, received for transferring this permit to some other company?

Maj. LADUE. I think we have no record in the War Department of any such matters. I do not understand that they transferred their permit.

Mr. GARNER. Well, if I understand it, they did not produce power and import it, but they sold power.

Gen. GREENE. Yes; they produced the power and sold it to the Cataract Power & Conduit Co., of Buffalo, as this long contract I gave you gave them the right to do; but what price they got I do not know. I suppose you can summon the officers of the Cataract Power & Conduit Co. here and they will tell you.

Mr. GARNER. I was trying to get at what profit this company that had the permit to import the power into the United States and did not utilize that permit, made out of the permit. That is what I wanted to get at, if possible.

Maj. LADUE. I am unable to give any information on that subject. I do not think we have any source of such information.

Mr. COOPER. When do you expect that report, House Report No. 246, to be printed?

Maj. LADUE. We heard from the Government Printing Office that it was likely to be out this afternoon.

The CHAIRMAN. I called up the Government Printing Office and the Public Printer told me they were rushing the work. We will have it here before the hearings close.

Mr. HARRISON. I ask for information. Has the report of the International Waterways Commission been made a part of this record?

The CHAIRMAN. It has not been.

Mr. HARRISON. It appears to me it ought to be made a part of this record. I have read that report and it is very interesting. I find it in the hearings before the Committee on Rivers and Harbors in 1906.

The CHAIRMAN. Have you got it, Mr. Harrison?

Mr. HARRISON. Yes; it is in this book here.

The CHAIRMAN. How many pages?

Mr. HARRISON. It is not very long. About eight pages.

The CHAIRMAN. If there is no objection, that report can be incorporated in the record of these proceedings, and it is so ordered.

[Senate Document No. 242, Fifty-ninth Congress, first session.]

REPORT OF THE AMERICAN MEMBERS OF THE INTERNATIONAL WATERWAYS COMMISSION, WITH LETTERS FROM THE SECRETARY OF STATE AND THE SECRETARY OF WAR INCLUDING MEMORANDA REGARDING THE PRESERVATION OF NIAGARA FALLS.

*To the Senate and House of Representatives:*

I submit to you herewith the report of the American members of the International Waterways Commission regarding the preservation of Niagara Falls. I also submit to you certain letters from the Secretary of State and the Secretary of War, including memoranda showing what has been attempted by the Department of State in the effort to secure the preservation of the falls by treaty.

I earnestly recommend that Congress enact into law the suggestions of the American members of the International Waterways Commission for the preservation of Niagara Falls, without waiting for the negotiation of a treaty. The law can be put in such form that it will lapse, say in three years, provided that during that time no international agreement has been reached. But in any event I hope that this Nation will make it evident that it is doing all in its power to preserve the great scenic wonder, the existence of which, unharmed, should be a matter of pride to every dweller on this continent.

THEODORE ROOSEVELT.

THE WHITE HOUSE, March 27, 1906.

DEPARTMENT OF STATE,  
Washington, March 24, 1906.

DEAR MR. PRESIDENT: I return the letter of the Secretary of War with the report of the American members of the International Waterways Commission, regarding the preservation of Niagara Falls.

I think the legislation recommended by the commission would be very useful.

Faithfully, yours,

ELIHU ROOT.

WAR DEPARTMENT,  
Washington, March 20, 1906.

MY DEAR MR. PRESIDENT: I herewith transmit, for submission by you to Congress, the report of the American members of the International Waterways Commission, made by them in accordance with the joint resolution approved March 15, 1906, and set out in their report. The recommendations of the commission of legislation necessary and desirable to prevent the further depletion of water flowing over the Niagara Falls suggests the question whether such legislation is within the limitations of the legislative power of Congress, when applied to nonnavigable parts of a stream which is within the borders of a State and which is only partly navigable, if the use of the water to be inhibited does not affect navigation in the navigable part of the stream below. It would seem that the treaty power exercised by the President and Senate with respect to a stream which forms the boundary between this country and another would be subject to less limitation in this regard than the legislative power of Congress, and therefore that it might be more advisable to effect the result sought by Congress through a treaty than through a statute.

Very respectfully,

W. H. TAFT, *Secretary of War.*

The PRESIDENT.

REPORT OF THE AMERICAN MEMBERS OF THE INTERNATIONAL WATERWAYS COMMISSION REGARDING THE PRESERVATION OF NIAGARA FALLS.

INTERNATIONAL WATERWAYS COMMISSION,  
OFFICE OF CHAIRMAN AMERICAN SECTION,  
Washington, D. C., March 19, 1906.

Sir: 1. The American members of the International Waterways Commission have the honor to submit for transmittal to Congress this report, in compliance with the following joint resolution approved March 15, 1906:

"Resolved by the Senate and House of Representatives of the United States of America in Congress assembled, That the members representing the United

States upon the International Commission created by section four of the river and harbor act of June thirteenth, nineteen hundred and two, be requested to report to Congress at an early day what action is in their judgment necessary and desirable to prevent the further depletion of water flowing over Niagara Falls; and the said members are also requested and directed to exert, in conjunction with the members of said commission representing the Dominion of Canada, if practicable, all possible efforts for the preservation of the said Niagara Falls in their natural condition."

2. The surplus waters of Lake Erie are discharged through the Niagara River into Lake Ontario, the mean level of Lake Erie being 572.86 feet and that of Lake Ontario being 246.61 feet above the sea. Leaving Lake Erie at Buffalo, the river is navigable and flows with a moderate slope to a short distance below Welland River, or Chippewa Creek, about 19 miles, in which distance it has a fall of about 14 feet. The slope here is suddenly increased and the river ceases to be navigable. In the next half mile it has a fall of about 50 feet, forming the rapids above the falls. It is divided by Goat Island into two arms of unequal size, that on the Canadian side carrying about seven times the volume of water carried by that on the American side. At the foot of Goat Island the waters of both arms plunge over a vertical precipice, constituting Niagara Falls proper, that on the Canadian side being usually known as the Horseshoe Fall, and that on the American side as the American Fall. The height of the Horseshoe Fall is about 161 feet and that of the American Fall 165 feet. Immediately below the falls the river is again navigable for a short distance, and then assumes the character of rapids as far as Lewiston, 7 miles from Lake Ontario, where it again becomes navigable and remains so until it enters the lake.

3. The volume of water flowing varies with the level of Lake Erie, which level is subject to variations of several feet, depending upon the rainfall, barometric pressure, and direction and force of the wind. At the mean level of the lake (elevation 572.86) the volume of discharge is 222,400 cubic feet per second. At a very low stage (elevation 571) the volume is 180,800. (See Annual Report, Chief of Engineers, U. S. Army, for 1900, p. 5361.) For short periods in mid-winter, or with prolonged adverse winds, it has sometimes been even less.

4. It is the great volume of water in the falls themselves and in the rapids which makes the place unique. The tremendous display of power in wild turbulence fascinates the mind, and gives to the question of Niagara's preservation a national interest.

5. The local authorities on both sides of the river have recognized their responsibilities in this matter, but have taken somewhat different views as to what these responsibilities are. As long ago as 1883 the State of New York provided for the acquisition of the lands in that State adjoining the Falls, with a view to creating a public park, and in 1885 it declared that these lands "shall forever be reserved by the State for the purpose of restoring the scenery of the Falls of Niagara to and preserving it in its natural condition; they shall forever be kept open and free of access to all mankind without fee, charge, or expense to any person for entering upon or passing to or over any part thereof." A commission of five was created to carry out the purposes of the act. The State reservation now includes 412 acres, part of which is under water, and an annual appropriation of some \$25,000 is made for its care and maintenance. The commission has no jurisdiction beyond the limits of the reservation, but it has never throughout its existence failed to protest and bring all its influence to bear against the depletion of the falls by the abstraction of water above and beyond the limits of the reservation. Nevertheless, the State legislature has granted numerous franchises for the diversion of water, as will appear further on.

6. Soon after the creation of the New York State reservation a public park was created on the Canadian side, called the Queen Victoria Niagara Falls Park, and was placed under the control of five commissioners. This park now extends practically the whole length of the Niagara River from Lake Erie to Lake Ontario, and embraces an area of about 734 acres. By an act of the Ontario Legislature (62 Victoria, chap. 11), it was enacted that "The said commissioners, with the approval of the lieutenant governor in council, may enter into an agreement or agreements with any person or persons, company or companies, to take water from the Niagara River or from the Niagara or Welland Rivers at certain points within or without the said park for the purpose of enabling such person or persons, company or companies to generate within or without the park electricity, or pneumatic, hydraulic, or other power, conducting or discharg-

ing said water through and across the said park or otherwise in such manner, for such rentals, and upon such terms and conditions as may be embodied in the agreement or agreements and as may appear to the lieutenant governor in council to be in the public interest." In 1903 this act was amended by adding thereto the words "but no such agreement shall be operative unless and until ratified and confirmed by the legislative assembly." (3 Edward VII, cap. 7.) Inasmuch as the park receives no aid from the legislature in the way of annual appropriations for its support, the commissioners have felt justified in using with some freedom the power thus granted in order to obtain a revenue for the general improvement and maintenance of the park. Prior to the amendment of 1903 they entered into four important agreements for the diversion of water, and caused an investigation to be made as to the availability of additional sites for power works. Two of these agreements were with a single corporation, which has thus far utilized only one.

7. The great water power available at Niagara Falls naturally attracted the attention of engineers at an early day, but it was not until it could be transmitted and used in the form of electricity that its development on a large scale became financially practicable. There are now five principal corporations engaged in furnishing or preparing to furnish electricity for commercial purposes obtained from the water power, two of them located on the American and three on the Canadian side. A brief description of each is here given. A map showing their location is submitted herewith. It is to be remarked that none of the diversions have been sanctioned by the United States Government.

8. *I. Niagara Falls Hydraulic Power & Manufacturing Co.*—This company was organized in 1877 under the general laws of the State of New York. It purchased a canal which had been constructed before the Civil War leading from Port Day, above the falls, through the city of Niagara Falls, to the edge of the cliff below the falls, where a grist mill had been established. (See map.) The length of this canal was about 4,400 feet, its width 36 feet, and its depth 8 feet. A width of 70 feet and depth of 10 feet had been projected. In 1881 the company established its first station for supplying electricity for lighting, this being the first public distribution for commercial purposes of electricity derived from Niagara Falls. The increasing demand for electricity and the improved methods of transmitting it led to a steady development of the works of this company and to the establishment of others. In 1895 an important enlargement of the canal having been begun, the right of the company to take water from the river was questioned by the commissioners of the State reservation at Niagara. An opinion was obtained from the attorney general of the State of New York (copy appended marked "A") in which it was held that the Niagara River is a navigable river in law, that the company had no right to increase the capacity of its canal, that it had no right to divert any water from the river, and that a diversion of water sufficient to diminish the flow over the falls was a nuisance and could be restrained.

The New York Legislature thereupon passed an act (chap. 968, Laws of 1896), in which the right of the company "to take, draw, use, and lease and sell to others to use the waters of Niagara River for domestic, municipal, and sanitary purposes, and to develop power therefrom for its own use and to lease and sell to others to use for manufacturing, heating, lighting, and other business purposes, is hereby recognized, declared, and confirmed." No limit as to the time during which these rights were to exist was fixed, but the amount of water to be taken was limited to that which could be drawn by a canal 100 feet wide, with such depth and slope as would maintain at all times a depth of 14 feet. The amount of water thus described is not specific. It is computed to be about 9,500 cubic feet per second for the works now under construction, but it would be possible to construct works under different plans which would use a much greater quantity of water. The company is now using about 4,000 cubic feet per second. It is extending its works, and expects to develop about 134,000 horsepower, in addition to which its tenant companies will develop about 8,000 horsepower. It has paid nothing to the State for its privileges. A list of the more important industries which this company supplies, with electricity is given in Appendix B. Its managers estimate that the power plant and the industries dependent upon it for power represent an investment of \$10,000,000.

8. *II. Niagara Falls Power Co.*—In 1886 the New York Legislature granted a charter to a company called the "Niagara River Hydraulic Tunnel Power & Sewer Co. of Niagara Falls," subsequently amended in 1886, 1889, 1891, 1892, and 1893. (See chap. 83, 1886; chap. 489, 1886; chap. 109, 1889; chap. 253, 1891;



chap. 513, 1892; chap. 477, 1893.) In 1889 the name of the company was changed to "The Niagara Falls Power Co." It is authorized to take water sufficient to generate 200,000 horsepower, computed to be about 17,200 cubic feet per second. Its franchise is for 50 years from March 31, 1896. The location of its works is shown upon the map. Beginning about a mile above the falls a short intake canal is constructed nearly at right angles with the river shore. Upon each side of the canal deep pits are excavated in the rock, at the bottom of which are placed the turbines, and over which are placed the power houses. The water, after passing through the turbines, is carried off by a tunnel about 21 feet in diameter under the city of Niagara Falls to the lower river, a distance of about 7,000 feet. The company has in operation two power houses having a combined capacity of about 105,000 horsepower.

It is working the plant nearly to its full present capacity, using about 8,000 cubic feet per second, in addition to which one of its tenant companies is using about 600 cubic feet. It paid nothing to the State for its privileges, but is bound to furnish free of charge electricity for light and for power and also water for the use of the State in the State reservation at Niagara and the buildings thereon, when requested to do so by the commissioners of the State reservation. It distributes electric power over a wide area of territory and to a great variety of commercial interests in Niagara Falls, Tonawanda, Olcott, and Buffalo, in some cases over 35 miles distant. A list of the consumers dependent upon this company is given in Appendix C. The investment is stated by the managers to be over \$6,000,000 in the power plant, and \$7,000,000 or \$8,000,000 in other industries established on its lands at Niagara Falls and dependent upon it.

10. *III. Canadian Niagara Power Co.*—This company is an allied company of the Niagara Falls Power Co. just described. It was incorporated by an act of the legislature of the Province of Ontario in 1892, which also confirmed an agreement dated April 7, 1892, between the company and the commissioners for the Queen Victoria Niagara Falls Park. In 1899 an act was passed conferring upon those commissioners authority to modify this agreement and to make other agreements for the construction of power works, as specified above. The agreement was modified July 15, 1899, and June 19, 1901.

11. The company is authorized to construct certain works, which works will have a capacity of 110,000 horsepower, and by inference to take the quantity of water required for that purpose, although the agreement does not in terms limit the capacity of the works or the quantity of water. The amount required to supply the works which have been approved and are under construction is computed to be about 9,500 cubic feet per second. The location of the works is shown upon the map. They are of the same general type as those of its allied company on the American side. Water is taken from the river about a quarter of a mile above the falls through a short canal and fore bay and discharged through penstocks into turbines near the bottom of a deep wheel pit excavated in the solid rock, over which is placed the power house. After passing through the turbines, the water is carried off by a tunnel about 2,000 feet long, and discharged into the river below the falls. The works are not completed, and less than half of the generators have been installed, the quantity of water used thus far being about 2,600 cubic feet per second. They are operated in connection with those of the allied company on the American side. They represent an investment of several million dollars.

12. The company agrees to pay for its privileges an annual rental of \$15,000, for which it may generate 10,000 electrical horsepower or less; for all above 10,000 and under 20,000 horsepower it pays in addition to the above \$1 per annum for each horsepower; for all above 20,000 and under 30,000 it pays a further sum of 75 cents per annum for each horsepower; and for all above 30,000 it pays a still further sum of 50 cents per annum for each horsepower; that is to say, the annual rental for generating 30,000 horsepower will be \$32,500, and for generating 110,000 horsepower will be \$72,500.

13. The period for which the privileges are granted is 50 years from May 1, 1890, but the company is entitled, at its option, to 3 renewals of 20 years each, the rentals to be adjusted at the time of each renewal, if the lieutenant governor in council so desires, and at the end of the third renewal the lieutenant governor in council may require a still further renewal of 20 years; the entire period thus covering by the agreement being 130 years.

14. *IV. Ontario Power Co.*—This company was incorporated by an act of the Dominion Parliament in 1887, and was empowered to take water from the Welland River, or Chippewa Creek, near its mouth at Chippewa; this is, in-

directly from the Niagara River. On the 11th of April, 1900, it entered into an agreement with the park commissioners to construct works for that purpose, but before progressing far in the work of construction it changed its plans, and on the 28th of June, 1902, it made another agreement with the commissioners, under which it is now working. It claims that the first agreement is still valid and may be utilized hereafter if the company so desires. Under the agreement of June 28, 1902, the company is authorized to construct works according to certain plans submitted, which works will have a capacity of 180,000 horsepower, and by inference to take the quantity of water required for that purpose, although the agreement does not in terms limit the capacity of the works or the quantity of water. The amount required to supply the works, which have been approved and are under construction, is computed to be about 12,000 cubic feet per second. The location of the works is shown upon the map. Water is taken from the river at Dufferin Island, about half a mile above the intake of the Canadian Niagara Power Co., or three-quarters of a mile above the Falls, and after passing through an elaborate system of screens enters a gate-house, and thence is transmitted through three underground conduits, each 18 feet in diameter, to a power house located near the foot of the cliff below the Falls. The length of the pipe line to the nearest penstock is 6,180 feet, and to the most distant penstock about 1,000 feet more. The works, which represent an investment of several million dollars, are not completed, only about 2,000 cubic feet per second now being used.

15. The company agrees to pay for its privilege an annual rental of \$30,000, for which it may generate 20,000 electrical horsepower or less. For all above 20,000 and under 30,000 horsepower it pays, in addition to the above, \$1 per annum for each horsepower; for all above 30,000 and under 40,000 it pays a further sum of 75 cents per annum for each horsepower, and for all above 40,000 it pays a still further sum of 50 cents per annum for each horsepower; that is to say, the annual rental for generating 40,000 horsepower will be \$47,500, and for generating 180,000 horsepower will be \$117,500.

16. The period for which the privilege is granted is 50 years from April 1, 1900, but the company is entitled, at its option, to three renewals of 20 years each, and after the third renewal the lieutenant governor in council may require a fourth renewal of 20 years, the rentals to be adjusted at each renewal, the entire period thus covered by the agreement being 130 years.

17. *V. Electrical Development Co.*—On the 29th of January, 1903, the commissioners for the Queen Victoria Niagara Falls Park entered into an agreement with three citizens of Canada, subsequently transferred to "The Electrical Development Co. of Ontario (Ltd.)," incorporated by act of the Legislature of Ontario. (5 Edward VII, chap. 12.) Under this agreement authority was given to take from the Niagara River water sufficient to develop 125,000 electrical horsepower. The amount is computed to be 11,200 cubic feet per second. The location of the works is shown upon the map. Water is taken from the river about midway between the intakes of the Canadian Niagara Power Co. and of the Ontario Power Co., or about half a mile above the Falls. A gathering dam, about 750 feet long, extends out into the river obliquely upstream, designed to divert the required amount of water into the power house, which is located upon the original shore line. Under the power house is a wheel pit, excavated in the solid rock to a depth of 158 feet, at the bottom of which are placed the turbines. After passing through the turbines the water is conveyed by a tunnel to the base of the Falls and discharged about midway between the Canadian and American shores. The works are not completed, and no water is now being used. They represent an investment of several million dollars.

18. The company agrees to pay for its privileges an annual rental of \$15,000, for which sum it may generate 10,000 electrical horsepower or less; for all above 10,000 and less than 20,000 horsepower it pays, in addition to the above, \$1 per annum for each horsepower; for all above 20,000 and less than 30,000 it pays a further sum of 75 cents per annum for each horsepower; and for all above 30,000 it pays a still further sum of 50 cents per annum for each horsepower; that is to say, the annual rental for generating 30,000 horsepower will be \$32,500, and for generating 125,000 horsepower will be \$80,000.

19. The period for which the privilege is granted is 50 years from February 1, 1903, but the same provisions are made for renewals as in the cases of the other companies, and the entire period covered by the agreement is thus 130 years.

20. In the case of each of the Canadian companies the authorities reserve the right to require that one-half the power generated shall be supplied to places in Canada.

21. Water is diverted also by the Park Electric Railway, under authority of the commissioners, the quantity to be used under plans now in execution, being estimated at 1,500 cubic feet per second, developing about 8,000 horsepower, while the actual present use is about 600 cubic feet per second.

22. In addition to the foregoing, six charters were granted by the New York Legislature between the years 1886 and 1894 to corporations organized to take water from the Niagara River, but it is believed that all, with the possible exception of two, have expired by limitation. In one case, the Niagara, Lockport & Ontario Power Co., an act to renew passed the legislature in 1904, but was vetoed by Gov. Odell in his message of May 14 of that year. The company, however, claims the rights granted under its original charter, and is constructing works for the distribution of electrical energy developed by other companies, but is not itself diverting water. Another corporation, the Niagara County Irrigation & Water Supply Co., has done some work, and claims that its charter has thus been preserved, but it has diverted no water. A list of these charters is given in Appendix D.

23. The Dominion of Canada has granted charters to two corporations in addition to those already mentioned organized to take water from the Niagara River for power purposes. It has chartered two other corporations, organized to take for power purposes water from Lake Erie which would naturally be tributary to the Niagara River. These companies have not finally developed their plans, and it is believed that their franchises are therefore not perfected, although all but one are still in force. In one case the charter has expired by limitation. The charters fix no limit to the amount of water which may be used. A charter was granted in 1889 by the Province of Ontario to the Hamilton Cataract, Power, Light & Traction Co. This company is using water from the Lake Erie level of the Welland Canal, which water would otherwise be tributary to the Niagara River. The volume now being used is estimated at about 1,800 cubic feet per second, and is to be increased. A list of these charters will be found in Appendix E.

24. The Chicago Drainage Canal, constructed under the authority of the State of Illinois, was designed to divert about 10,000 cubic feet per second of water which would naturally flow over Niagara Falls. It has not been fully completed, but it now has a capacity of about 5,000 cubic feet per second. The amount which it is actually diverting has thus far been limited by the Secretary of War to about 4,200 cubic feet per second. In addition to the foregoing, about 333 cubic feet per second of Lake Erie water is now taken for power purposes from the Erie Canal at Lockport.

25. Full and precise information concerning the plans and the legal rights of the companies which have not begun or completed their works has not been obtainable. In the cases of the corporations now furnishing or preparing to furnish electricity for commercial purposes, the franchises are vague as to the volume of water to be used, which is the feature of greatest interest here. We have computed the volumes from the available data, and have endeavored to make the figures conservative. It must be understood that these figures are fair approximations. In proceeding to an examination of the effect upon Niagara Falls of the works proposed, the subject is much simplified by considering only those companies which derive their water from the Niagara River itself, and that is the course here pursued. Any effects caused by these works will be exaggerated by the other works mentioned.

26. The total quantity of water to be taken from the river by works now authorized is:

	Cubic feet.
Niagara Falls Hydraulic Power & Manufacturing Co.....	9,500
Niagara Falls Power Co.....	17,200
Canadian Niagara Power Co.....	9,500
Ontario Power Co., not including Welland River Development.....	12,000
Electrical Development Co.....	11,200
Niagara Falls Park Railway Co.....	1,500
Total .....	60,900

Of this amount 26,700 cubic feet is to be taken on the American side and the remainder, 34,200 cubic feet, on the Canadian side. That is, 27 per cent of the average discharge and 33 per cent of the low-water discharge of the Niagara

River will cease to pass over the Falls when these works are completed and in full operation. The quantity to be diverted is more than double the quantity which now passes over the American Fall, which at the average stage is about 27,800 cubic feet. That this will in general have an injurious effect upon the Falls seems self-evident. The volume of water to be diverted is about the equivalent of the entire discharge of Lake Superior over the Sault Ste. Marie. The amount thus far actually diverted is but 17,800 cubic feet per second, and has had an appreciable effect upon the Falls. To foretell with accuracy the effects in detail of the full diversion authorized would require a more complete knowledge of the bed of the river than is now obtainable. The water taken on the Canadian side below the crest of the rapids will affect the Horseshoe Fall alone. If all that taken on the American side should affect the American Fall alone, it would practically leave it dry; but it seems probable that only a part of this diversion will be at the expense of the American Fall.

Exactly what portion that will be can not be stated with precision, but from a study of the channels and reefs, so far as they are known, a reasonable estimate is that the water would come from the two arms in about the proportion of one-sixth from the American Fall and five-sixths from the Horseshoe Fall. Exactly what form the changes in the two cataracts will take, whether they will be made narrower, or be broken up into a greater number of streams, or simply be reduced in volume, retaining in general their present form, can not now be foretold, for the reason that there is no accurate knowledge of the form of and depth of water on the crests. If 69,000 cubic feet per second be diverted, the loss will be important, but if the diversion be limited to this amount, or reduced, as hereafter indicated, it may not prove disastrous. This can not be definitely determined until the works now under construction have been completed and put in operation. When that happens, if it be found that the Falls have not suffered serious damage, as a scenic spectacle, it does not follow that additional water may be diverted with impunity. Additional diversion would be an experiment even more dangerous than that now being tried, and in our opinion should not be permitted.

27. In return for the impairment of the Falls thus far authorized, the State of New York will receive practically nothing for the 342,000 horsepower authorized on that side, and the Queen Victoria Niagara Falls Park will receive an annual rental of \$270,000, or an average of 65 cents per horsepower for the 415,000 horsepower authorized on the Canadian side. These figures do not include the 8,000 horsepower being developed by the electrical railway nor the power developed by the Hamilton Co. with water from the Welland Canal.

28. If all the water and all the head from the top of the upper rapids to the foot of the Falls could be utilized, there would result over 4,000,000 mechanical horsepower. Probably space could be found, if desired, for works which would utilize about half of this, or, say, 2,000,000 horsepower, or possibly more. As they could not utilize all the head, they would use much more than half the water. It will require time to create a market for all this power, but it is reasonably certain that it will in due season be found if the development of the power itself is to go on unchecked. The difference in cost in favor of falling water over any other method of developing power is so great that all other methods are sure to be abandoned where sufficient water power is available. The difference at Niagara Falls is probably not less than \$15 or \$20 per annum per horsepower. The cost of transmission to distant points increases with the distance, and finally becomes so great as to be unprofitable; but electrical engineers are engaged in improving the methods and reducing the cost. An average difference of cost for each horsepower can not now be given with any close degree of approximation, but the difference, whatever it is, is a perpetual annual saving, which, if capitalized, will show that the commercial value of the power at Niagara Falls is very great and is to be measured by the hundred millions of dollars.

29. Whether this commercial asset shall be utilized to such an extent as to seriously impair the majesty and scenic beauty of the Falls depends upon the public will. In our opinion the commercial advantages of a large increase in development of power will not compensate for the great loss to the world of the inspiration, æsthetic education, and opportunity for recreation and elevating pleasure which the mighty cataract affords. The direct advantages to the public from revenue is nothing on the New York side of the river and comparatively slight on the Canadian side. There is, of course, an indirect advantage due to added taxable wealth and reduction in the cost of power, but these advantages are, in our opinion, slight in comparison with those which

spring from the preservation of the beauty and majesty of the Falls in their natural condition. Over 800,000 people visit the Falls annually, deriving pleasure and inspiration from them. The nations of the world have always recognized the great value of parks and reservations, and throughout the civilized world they have preserved places of natural grandeur and beauty and furnished parks, artificially beautified, for rest, education, and the elevation of their people. An illustration may be given in the case of the city of New York, one of many hundreds. There the municipality has acquired, in Central Park, property which is estimated to be worth \$225,000,000, and has spent millions upon its improvement and ornamentation. The United States Government has reserved lands of striking picturesqueness, grandeur, and interest, regardless of their value. These illustrations would seem to prove conclusively that the people are not inclined to offset mere commercial values against the intangible but none the less great advantages found in the preservation of the great works of nature.

30. It is probably not expedient to attempt the recovery of the rights granted to companies which have taken full advantage of them. In the case of the Niagara Falls Power Co., on the American side, the franchise authorizes it to develop 200,000 horsepower. It has constructed works having about half that capacity, but has not begun the construction of the additional works, and we believe, has no present intention of doing so. In the case of the Ontario Power Co., on the Canadian side, the construction of works under the agreement of April 11, 1900, has been indefinitely postponed. The authority for the additional works in both these cases could probably be withdrawn without inflicting an unreasonable hardship. All franchises of which advantage has not been taken should be extinguished.

31. The following is a summary of the foregoing statement of facts:

(a) The glory of Niagara Falls lies in the volume of its water rather than in its height, or in the surrounding scenery.

(b) Works are now authorized and partially completed at the Falls which will divert from the Niagara River above the Falls about 27 per cent of the average discharge, and about 33 per cent of the low-water discharge, which is more than double the quantity now flowing over the American Fall. In addition to this, water naturally tributary to the Niagara River is being diverted through the Chicago drainage canal, and for power in addition to navigation purposes through the Erie and the Welland Canals.

(c) The effect of this withdrawal of water is to injure both the American and the Horseshoe Falls in nearly equal proportions. While the injury will be perceptible, it may not be destructive or disastrous.

(d) Improvements in the transmission of electric power and increased demand will make a market for all the power which can be developed at Niagara Falls, and will cause a destruction of the Falls as a scenic spectacle if the development be allowed to go on unchecked.

(e) Charters have been granted to corporations which propose to divert additional amounts in quantities not now limited.

(f) The sums of money invested, or being invested, in the works now in operation or under construction, and in the industries dependent upon them, amount to many millions of dollars. It is probably not expedient to attempt the withdrawal of the rights thus utilized.

(g) The commercial value of the water power at Niagara Falls is very great, but if compared with values set aside by wealthy communities elsewhere for park purposes this value is not too great to be devoted to similar purposes. The place is visited annually by about 800,000 people.

32. If the Falls are to be preserved it must be by mutual agreement between the two countries. As a step in that direction we recommend that legislation be enacted which shall contain the following provisions, viz:

(a) The Secretary of War to be authorized to grant permits for the diversion of 28,500 cubic feet per second, and no more, from the waters naturally tributary to Niagara Falls, distributed as follows:

	Cubic feet.
Niagara Falls Hydraulic Power & Manufacturing Co.....	9,500
Niagara Falls Power Co.....	8,600
Erie Canal or its tenants (in addition to lock service).....	400
Chicago Drainage Canal.....	10,000

(b) All other diversion of water which is naturally tributary to Niagara Falls to be prohibited, except such as may be required for domestic use or for the service of locks in navigation canals.

(c) Suitable penalties for violation of the law to be prescribed.

(d) The following prohibition to remain in force two years, and then to become the permanent law of the land, if, in the meantime, the Canadian Government shall have enacted legislation prohibiting the diversion of water which is naturally tributary to Niagara Falls, in excess of 36,000 cubic feet per second, not including the amounts required for domestic use for the service of locks in navigation canals. It is assumed, however, that an understanding upon this subject would be reached by treaty.

The object of such legislation would be to put a stop to the further depletion of the Falls, and at the same time inflict the least possible injury upon the important interests now dependent upon this water power. The amount to be diverted on the Canadian side has been fixed with a view to allowing to the companies on that side the amounts for which they now have works under construction, which are:

	Cubic feet.
Canadian Niagara Power Co.....	9,500
Ontario Power Co.....	12,000
Electrical Development Co.....	11,200
Niagara Falls Park Railway Co.....	1,500
Welland Canal or its tenants (in addition to lock service).....	1,800

34. One of the effects of such legislation would be to give to Canada the advantage of diverting 7,500 cubic feet per second more than is diverted in the United States. The advantage is more apparent than real, since the power generated on the Canadian side will to a large extent be transmitted to and used in the United States. In the negotiation of a treaty, however, the point should be considered.

35. The substance of this report was submitted to our Canadian colleagues before the passage of the joint resolution, with a view to uniting in a joint report under the general law providing for the commission. There was a substantial agreement in the statement of facts, and such differences as developed with respect to the recommendations which ought to be made did not seem insuperable, but our colleagues desired time for further consideration. We have no doubt of their sympathetic interest in carrying out that part of the instructions contained in the resolution which requires us "to exert in conjunction with the members of said commission representing the Dominion of Canada, practicable, all possible efforts for the preservation of Niagara Falls in their natural condition."

Very respectfully,

O. H. ERNST,  
Colonel, Corps of Engineers, Chairman.  
GEORGE CLINTON,  
Member.  
GEO. Y. WISNER,  
Member, American Section.

The SECRETARY OF WAR,  
Washington, D. C.

REPORTS UPON THE EXISTING WATER-POWER SITUATION AT NIAGARA FALLS, SO FAR AS CONCERNS THE DIVERSION OF WATER ON THE AMERICAN SIDE—REPORT BY THE AMERICAN MEMBERS OF THE INTERNATIONAL WATERWAYS COMMISSION.

INTERNATIONAL WATERWAYS COMMISSION,  
OFFICE OF AMERICAN SECTION,  
Buffalo, N. Y., November 15, 1906.

MR. SECRETARY: The American members of the International Waterways Commission have the honor to return herewith the report dated October 5, 1906, by Capt. Charles W. Kutz, Corps of Engineers, United States Army, upon the subject of permits for diverting water on the American side at Niagara Falls, referred to them by your indorsement of October 13.

In our report<sup>1</sup> dated September 29, 1906, we gave a brief description of the four kinds of permits authorized by the act approved June 29, 1906, and we concurred in the recommendations contained in Capt. Kutz's report<sup>1</sup> of August 15, 1906, which referred to permits of the third kind, or those for transmitting electrical power from Canada into the United States to the aggregate amount of 160,000 horsepower. The report by Capt. Kutz now under consideration

<sup>1</sup> Printed in War Department Document No. 284, Office of the Chief of Engineers.

refers to permits of the first kind, or those for diverting water from the Niagara River on the American side to an aggregate amount not exceeding 15,600 cubic feet per second.

The conditions prescribed in the law for this kind of permits are that—

1. They must be issued "to individuals, companies, or corporations which are now actually producing power from the waters of said river or its tributaries in the State of New York or from the Erie Canal."

2. The amount of water to be allowed must not exceed that "now actually in use or contracted to be used in factories the buildings for which are now in process of construction."

3. The amount to be allowed "to any one individual, company, or corporation as aforesaid" must not exceed 8,600 cubic feet per second.

4. The total amount to be allowed "to all individuals, companies, or corporations as aforesaid" must not exceed an aggregate of 15,600 cubic feet per second.

Applications have been received from the Niagara Falls Power Co. for a permit to divert 8,600 cubic feet per second, from the Niagara Falls Hydraulic Power & Manufacturing Co. for a permit to divert 6,400 cubic feet per second, and from numerous industries at Lockport and at Medina, using small quantities of water from the Erie Canal.

After a careful examination of all the circumstances which should affect a decision as to the amount of water to be allowed under the act, including the capital invested, the present capacity of the works and their present output, the quantity of water now actually in use, the contracts made for furnishing power, with the dates of such contracts, the future capacity of the works as projected, and the charter rights under New York State law, Capt. Kutz reaches the conclusion that a permit should be granted to the Niagara Falls Power Co. for the maximum amount allowed, viz, 8,600 cubic feet per second. He finds that the company and its tenants have that amount actually in use and may reasonably ask for the whole of it, and in that opinion we concur. He is in doubt whether it should include the water which is occasionally used for sluicing débris and ice. The amount of this is not accurately known, but it is estimated at between 600 and 700 cubic feet per second during the sluicing process. It is used only intermittently. The total amount thus used in a year would, if distributed throughout the year, be but a small average per second. The law is explicit in prohibiting a permit for any amount whatever in excess of 8,600 cubic feet per second, but it seems a reasonable interpretation to take that as the general average and to allow the company to use a slightly less amount during the greater part of the year in order to accumulate enough water to supply the demands of sluicing upon the occasions when it is needed.

After a similar careful examination of all the circumstances relating to the Niagara Falls Hydraulic Power & Manufacturing Co., Capt. Kutz reaches the conclusion that a permit should be granted that company for the diversion of 5,743 cubic feet per second, exclusive of the amount required for sluicing, or for 6,403 cubic feet per second if the water for sluicing be included. The latter is estimated at 660 cubic feet per second. It seems to us desirable that the permits to the two companies should resemble each other in their provisions for sluicing. If to the 5,743 cubic feet per second just mentioned there be added 107 cubic feet per second as an average for sluicing, an allowance will be made for the accumulation of water which will provide 660 cubic feet per second for sluicing during 116½ hours of each month, or 59 days in each year, an allowance which is ample. Under this arrangement the amount to be granted to this company for the use of itself and its tenants would be 5,850 cubic feet per second.

The industries using water from the Erie Canal are numerous, and the quantity of water diverted is comparatively small. At Lockport 27 persons or corporations are using water taken either from the upper or the lower level. It is understood that most of the water from the upper level is returned to the canal; but the arrangement of tunnels is such that the water has two outlets, and it is impossible to determine what portion is permanently diverted into Eighteenmile Creek. Many of these industries are located one below the other on Eighteenmile Creek, and use the same water successively, taking it from the lower level. The quantity of water permanently diverted from the canal at Lockport is found from measurements taken above and below all diversions to be upon an average 193 cubic feet per second.

Industries at Medina, N. Y., use about 165 cubic feet per second. The number of the industries is not given, but it is understood that they are in general of about the same magnitude as those at Lockport.

The total amount of water diverted from the Erie Canal is therefore 358 cubic feet per second, and the number of industries using it is between 30 and 40. Many of these industries have made application for permits; but many others have not, and of those applying many use the water which has previously been used by one or more others. Manifestly there is difficulty in apportioning the proper amount among so great a number. After apportionment there would be difficulty in the enforcement by the Federal authority of the provisions of the permits if granted. The canal is owned by and is under the exclusive control of the State of New York. The State engineer protests against the granting by the United States of any permit which shall impose an obligation upon the State. Capt. Kutz suggests that the difficulty may be met by treating all these industries as tenants of the State and granting the permit to the State, as it is proposed to provide for the tenants of the Niagara Falls Power Co. and of the Niagara Falls Hydraulic Power & Manufacturing Co. by the permits of those companies. He recommends that a permit for the diversion of 358 cubic feet per second be granted to the State of New York.

The objections to this course are that the State of New York has not applied for a permit and might perhaps not be willing to accept one, and it is a somewhat forced interpretation of the law to include the State among the "individuals, companies, or corporations which are now actually producing power," to whom the privilege must be restricted. It is our opinion that the person first using the water after it leaves the canal should have a permit directly from the Secretary of War, and that persons using it afterwards may be allowed to do so without a permit. The information necessary for the issuance of these permits is not now at hand. We have taken steps to secure it, and if the honorable Secretary of War concurs in the opinion just expressed we propose to submit a supplementary report upon the subject as soon as possible hereafter.

We accordingly recommend that permits for the diversion of water from the Niagara River be granted to the Niagara Falls Power Co. for 8,600 cubic feet per second and the Niagara Falls Hydraulic Power & Manufacturing Co. for 5,850 cubic feet per second, it being understood that these are average amounts, and that the larger amounts occasionally required for sluicing may be accumulated by using generally smaller amounts.

Yours, very respectfully,

O. H. ERNST,  
*Chairman.*  
GEORGE CLINTON,  
*Member.*  
E. E. HASKELL,  
*Member.*

Hon. W. H. TAFT,  
*Secretary of War.*

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REPORT BY CAPT. CHARLES W. KUTZ, CORPS OF ENGINEERS.

WAR DEPARTMENT,  
OFFICE OF THE CHIEF OF ENGINEERS,  
Washington, October 5, 1906.

GENERAL: 1. Referring to the orders of the Secretary of War dated July 14, 1906, in reference to the power situation at Niagara Falls, and to the report dated August 15, 1906, in reference to the Canadian power companies and their associated transmission companies, I now have the honor to submit a report in reference to those companies seeking permits to divert water on the American side.

2. The law limits the present granting of permits for diversion to those individuals, companies, or corporations which are now using water for power purposes from the Niagara River, or its tributaries, or from the Erie Canal.

3. The only companies coming within the scope of the act of Congress are the Niagara Falls Power Co., the Niagara Falls Hydraulic Power & Manufacturing Co., and numerous small industries at Lockport and at Medina, N. Y.

4. Upon request, the two large companies prepared specific replies in writing to each of the questions propounded by the Secretary of War, and copies of these replies are appended hereto, marked Appendix I and Appendix J.



*The Niagara Falls Power Co.*

5. This company was created, organized, and continued by six acts of the legislature of the State of New York, as follows: Chapter 83 of laws of 1886, chapter 489 of the laws of 1886, chapter 109 of the laws of 1889, chapter 253 of the laws of 1891, chapter 513 of the laws of 1892, and chapter 477 of the laws of 1893. In section 2 of one of these acts (chapter 513, laws of 1892) it is provided "that nothing contained therein or in any of the former acts concerning said corporation shall be so construed as to confer an exclusive right nor any right to infringe upon the State reservation, or to obstruct the navigation of the Niagara River, or to take therefrom more water than shall be sufficient to produce two hundred thousand effective horsepower."

6. The general construction adopted by this company for utilizing the energy of the Falls is as follows: A short canal has been excavated at a point about 1 mile above the Falls on the American side, its direction being approximately at right angles to the river; this canal is 250 feet wide at the mouth, narrowing to 100 feet at its upper end; its depth is about 12 feet. Two power houses have been constructed on opposite sides of this canal. The water is carried by the means of penstocks to the turbines which are installed near the bottom of the two wheel pits under the two respective power houses. After leaving the turbines the water is discharged into a horseshoe-shaped tunnel with an area equivalent to that of a circle 21 feet in diameter, which carries it to the lower river, a distance of about 7,000 feet.

7. In power house No. 1 the turbines discharge their water into the tailrace openly without draft tubes. In power house No. 2 draft tubes are used, making the theoretical effective head 144 feet in power house No. 2 as against 136 feet in power house No. 1. These power houses have a combined generator capacity of 105,000 horsepower.

8. In addition to the above, water is supplied from the intake canal to the International Paper Co. and to the pumping plant of the Niagara Falls Water Works Co.

9. As a result of more or less recent tests made by the engineers of the power company, it was determined that an average in the two power houses of 0.101 cubic foot of water per second was required to develop 1 electrical horsepower at the switchboard. If this determination is correct, the development of 100,000 electrical horsepower, the nominal capacity of the plant, would require 10,100 cubic feet of water per second. This amount exceeds by 1,500 cubic feet the amount computed as necessary under the assumed efficiency of the turbines and the theoretical effective heads noted above. This difference is due to certain defects in the design, the tail water in the two wheel pits standing at such a level as to materially affect the effective head.

10. The plant of the International Paper Co., one of the power company's tenants, consists of 6 turbines, each rated 1,600 horsepower, and 2 centrifugal pumps, representing about 69 horsepower. The amount of water used by this company was determined by test made in 1904, using a current meter placed at various points in a given cross section of the paper mill's headrace. These measurements were taken with an average of 87 per cent of gate opening, and showed a flow of about 660 cubic feet per second, or about 750 cubic feet per second with full gate opening.

11. The hydraulic plant of the Niagara Falls Water Works Co. consists of two Pelton water wheels, each rated at 400 effective horsepower, and the amount of water used does not exceed 75 cubic feet per second. The officers of the Niagara Falls Power Co. are of the opinion that the use of water by the Water Works Co. for developing power to run their pumps is exempted from the prohibition of diversion on the ground that it is indirectly used for domestic and sanitary purposes.

12. Deducting the amounts used by its tenant companies, 825 cubic feet per second, from the maximum amount for which a permit can now be granted to any one individual, company, or corporation—that is, 8,600 cubic feet per second—there remains 7,775 cubic feet a second for use in the power plant. Again, deducting the amount used in the exciter turbines, stated to be 35 cubic feet per second, and using the ratio obtained from the company's tests above mentioned, the maximum electrical output of this company is limited by law for the present to 76,630 electrical horsepower.

13. This limitation does not take into consideration the water that is occasionally used for sluicing debris and ice, the amount of which is not known. It is questionable whether water used for this purpose should be included in that for which a permit is considered necessary. Such use is intermittent, and

it is practically impossible to determine the amount used at any given time. The Niagara Falls Hydraulic Power & Manufacturing Co. estimates that 660 cubic feet per second is at times required for this purpose. If it be determined that water used for sluicing ice must be included in the amount covered by the permit, the mid-winter electrical output of this company will be still further curtailed.

14. The maximum output of this company during the week preceding that in which the examination was made was 64,800 horsepower, while the average of the maximum weekly loads since October, 1905, was 73,000 horsepower.

15. The company in its statement includes a list of contracts for furnishing power in which the optional amounts aggregate 167,000 horsepower. Of this amount 102,550 horsepower has been called and is now in use. These contracts cover the output of both this plant and that of the Canadian Niagara Power Co. The amount called for represents the sum of the maximum amounts of power used by their tenants. These peak loads never occur simultaneously, and the actual peak electrical load generated up to date by the American and Canadian plants combined has been about 85,000 horsepower.

16. The books of this company show an investment in power plant of \$13,500,000. This amount is largely in excess of what it would cost to reproduce it, as it is evident from the investments now being made on the Canadian side. It is also evident from the estimate of \$7,000,000 given as the amount required to increase the capacity of the plant to the statutory limit—that is, 200,000 effective horsepower. This large investment, \$135 per horsepower developed, is partly accounted for by the fact that this company was the pioneer in this method of utilizing the power of Niagara Falls, but it can not fairly be said to be due to investments made with the object of doubling the capacity of the plant. The intake is probably larger than necessary for the development of 100,000 horsepower, but the rest of the plant was designed for that amount. Notwithstanding this large investment, the books of the company show that its net earnings, after paying interest on its bonded debt and all other fixed charges, now amount to 9 per cent on its outstanding capital stock of over \$4,000,000.

17. This company is entitled by reason of its contracts to the fullest consideration that is now possible under the law—I. e., a permit for the diversion of 8,600 cubic feet per second. Such a permit will practically limit the company to its present output and will not allow any growth, but if this company is allowed to receive from the Canadian Niagara Power Co. the amount recommended, 60,000 electrical horsepower, the normal development of the two companies considered as one will not be seriously interfered with.

*The Niagara Falls Hydraulic Power & Manufacturing Co.*

18. This company was chartered under the laws of the State of New York in 1878, and subsequently, by an act of the Legislature of the State of New York, known as chapter 968, laws of 1896, its rights were confirmed. In this confirmatory act the company was limited and restricted to the use of "such quantity of water as may be drawn by means of the hydraulic canal of said company when enlarged through its entire length to a width of 100 feet and to a depth and slope sufficient to carry at all times a maximum uniform depth of 14 feet of water." This limitation is more or less indefinite, but the capacity of such a channel has been computed to be 9,500 cubic feet per second without material diminution of the head.

19. The canal leaves the Niagara River about 1 mile above the Falls and extends through the city to a point about one-half mile below the Falls, where the power houses of the company are situated.

20. It is being widened and deepened to the maximum authorized dimensions. The widening down to the water surface has been completed, except at two points where work is now in progress. A great deal of work has also been done toward giving it a uniform depth of 14 feet throughout the width of 100 feet, but this work has not been completed.

21. The company disposes of its power in three ways. First, it sells water to six corporations, who develop power with their own machines. This water is used under heads varying from 50 to 125 feet, with an average head, considering the quantities used at each elevation, of about 90 feet, or less than one-half of the maximum effective head. The amount of water so furnished is computed to be 1,332 cubic feet per second. In power house No. 2 (No. 1 being obsolete),

situated on the river bank at the foot of the bluff, the company develops 32,000 mechanical horsepower, using for the purpose 2,011 cubic feet of water per second under an effective head of 200 feet. Of this amount 27,368 mechanical horsepower are sold to customers, who convert it into electrical power by the use of generators attached to the power company's turbines. The remaining power developed in power house No. 2 is converted into and sold as electrical power. For several years past the company has been engaged in the further development of its water power, and now has under construction a fore bay capable of furnishing sufficient water, when the canal has been widened and deepened to the extent authorized by law, to develop practically 100,000 additional horsepower. As stated above, much of the necessary enlargement work on the canal has been completed, the greater part of the excavation for the power house itself has been completed, the fore bay is under construction, and intakes leading to the penstocks, with their corresponding gates and valves, are being installed for the complete development.

Of the amount to be developed in power house No. 3, 36,000 horsepower is for use of the Pittsburgh Reduction Co., a contract for its sale having been entered into on the 20th day of November, 1905. For developing this amount there will be required about 2,400 cubic feet of water per second. As the conditions laid down by the act of Congress have been complied with so far as this additional development is concerned, it is recommended that the necessary permit be issued. In the statement furnished by the company as to the water now in use there is included 660 cubic feet per second for sluicing debris and ice. It is questionable whether this amount should be included in that for which a permit is considered to be necessary. Such use is intermittent, and it is practically impossible to determine the amount used at any given time. If the diversion of water for this purpose does not require a permit, this company is entitled under the law to a permit for 5,743 cubic feet per second, being the amount now actually in use and contracted to be used in factories in process of construction. If the water used for sluicing ice and debris must be included the permit should be for 6,403 cubic feet per second.

22. The settlement of this question will not affect the Niagara Falls Hydraulic Power & Manufacturing Co., but will affect the output of the Niagara Falls Power Co.

23. The investment represented by the plant of the Niagara Falls Hydraulic Power & Manufacturing Co. is \$5,600,000. This includes \$1,400,000 expended or obligated for work on the canal and in connection with power house No. 3. It is estimated that \$1,500,000 additional will be required for completing the canal and power house No. 3.

24. While the granting of a permit to this company for the diversion of 6,400 cubic feet per second will enable it to meet its contract obligations, it will not permit it to take the full advantage of the investment already made nor allow for any growth. The investment that will be rendered useless is roughly estimated at \$290,000 for the canal and \$360,000 for power house No. 3.

*Industries using water for water purposes derived from Erie Canal at or near Lockport, N. Y., and at Medina, N. Y.*

25. In 1826 the State of New York leased to Richard Kennedy and Junius H. Hatch so much of the waters of the Erie Canal as could be spared from the canal at the head of the locks at Lockport at an annual rental of \$200. The lease referred to was perpetual and in 1856 it, or the principal part of the rights under it, came into the hands of the Lockport Hydraulic Co., which has since then operated the lease. The lease provides that the water so used shall be discharged into the lower level at such place and in such manner as the State canal commissioners shall from time to time deem most advisable for the security of the canal and for the convenience of the navigation thereon.

26. In an investigation of this matter made in July by the secretary of the American section of the International Waterways Commission it was developed that the arrangement of tunnels in Market Street near Exchange Street was such that the water drawn from the hydraulic race could find its outlet either into the canal or through the culvert to the mill pond and eventually down Eighteenmile Creek, thus making it impossible to determine what portion of the water supplied to these mills is permanently diverted from the canal, though it is understood that as a rule it is all returned to the canal. In the application filed with the Secretary of War by the Lockport Hydraulic Co. the amount of

water used by its tenants and delivered to the lower level is stated to be approximately 500 cubic feet per second, whereas Mr. Henry A. Van Alstyne, New York State engineer and surveyor, is authority for the statement that 350 cubic feet per second is the amount taken from the upper level and returned to the lower level of the canal. In a subsequent letter from the attorney for the Lockport Hydraulic Co. it is learned that the amount named in the application represents the maximum quantities covered by the company's lease, and further that it includes the amount of water required to operate the machinery of the Holly Manufacturing Co.'s plant not now in actual operation, but which was used for more than 20 years prior to 1904, and which then developed 150 horsepower.

27. In addition to the industries which obtain their water through the Lockport Hydraulic Co. there are a number of large manufacturing plants being operated at the city of Lockport by power produced from the surplus water of the canal spilled from the canal below the locks and used successively in the progress of the water down the channel of Eighteenmile Creek. The use of the water spilled from the lower level of the canal is not covered by any contract with the State of New York, and it is understood that the State of New York derives no revenue from it. Furthermore the State engineer and surveyor, Mr. Henry A. Van Alstyne, protests against the granting of any permit by the United States to parties using water spilled from the canal, on the ground that it will impose an obligation on the State of New York to furnish the amount of water covered by the permit, an obligation which does not now exist.

28. To supply losses due to evaporation and leakage it will probably be necessary under any circumstances to pass a certain amount of water around the locks from the upper level to the lower level, so that the amount so transferred does not appear to have any particular bearing on the subject of this investigation. The real question to be determined is the amount of water that is taken from the canal for power purposes and not returned thereto.

29. Reliable gaugings made under the direction of the State engineer and surveyor of the State of New York show that the average amount of water flowing eastward in the Erie Canal in the rock cut at the city of Lockport above all points of diversion of water for power is 806 cubic feet per second, and that the flow in the canal below the locks at Lockport and below all points where water is diverted for power or other purposes is 612 cubic feet per second, so that there is diverted from the canal in the city of Lockport 193 cubic feet per second. This includes both the water diverted for power and the water passing over the canal spillway.

30. As all water used at Lockport, whether permanently diverted from the canal or whether transferred from one level to a lower level of the same canal, is brought from Lake Erie in a waterway constructed and paid for entirely by the State of New York, it would seem that any permit granted by the United States for the diversion of water from the Erie Canal should be granted not to the individual users, but rather to the State of New York. The same principle is followed in the case of the Niagara Falls Power Co. and the Niagara Falls Hydraulic Power & Manufacturing Co., each of which owns its intake canal and has tenants taking water therefrom, though the permit is granted for the full amount to the owner of the intake canal.

31. Conflicting information has been received concerning the amount of Lake Erie water that is taken from the Erie Canal by the spillway and gates at Medina, N. Y. Mr. Franchot, the superintendent of public works, State of New York, stated, under date of July 17, that he believed the amount of water fed into the canal from Oak Orchard Creek and Genesee River was practically equal to the amount abstracted from the canal, while Mr. Bond, the chairman of the advisory board of consulting engineers, State of New York, is authority for the statement that the Oak Orchard feeder supplies in low years only 10 cubic feet per second, while the amount abstracted is about 175 cubic feet per second. Assuming the latter information to be more nearly correct, the maximum amount of Lake Erie water diverted from the canal at this point is 165 cubic feet per second. The total amount of Lake Erie water that is permanently diverted from the Erie Canal at times of minimum flow in the feeder is therefore 193 plus 165, or 358 cubic feet per second, and it is recommended that a permit for this amount be issued to the State of New York.

82. If it be determined that the amount of water occasionally used for sluicing debris and ice must be included in any permits that are granted, the interested parties are, in my opinion, entitled under the law to permits for diversion as follows:

	Cubic feet per second.
Niagara Falls Hydraulic Power & Manufacturing Co. in greater detail than is Niagara Falls Hydraulic Power & Manufacturing Co.....	6,403
State of New York.....	358

33. Descriptions of the power plants of the Niagara Falls Power Co. and the Niagara Falls Hydraulic Power & Manufacturing Co. in greater detail than is given in the body of the report are appended hereto, marked Appendix K and Appendix L. They were prepared by Mr. Earl Wheeler, electrical engineer, who assisted in the examination.

Very respectfully,

CHARLES W. KUTZ,  
*Captain, Corps of Engineers.*

Brig. Gen. A. MACKENZIE,  
*Chief of Engineers, U. S. A.*

REPORTS UPON THE EXISTING WATER-POWER SITUATION AT NIAGARA FALLS, SO FAR AS CONCERNS THE CANADIAN POWER COMPANIES AND THEIR ASSOCIATED TRANSMISSION COMPANIES—REPORT BY THE AMERICAN MEMBERS OF THE INTERNATIONAL WATERWAYS COMMISSION.

INTERNATIONAL WATERWAYS COMMISSION,  
OFFICE OF AMERICAN SECTION,  
Buffalo, N. Y., September 29, 1906.

MR. SECRETARY: The American members of the International Waterways Commission have examined the report dated August 15, 1906, by Capt. Charles W. Kutz, Corps of Engineers, United States Army, upon the subject of permits to the power companies at Niagara Falls, referred to them by your indorsement of September 5. They have the honor to return it herewith, and to submit in connection therewith the following remarks:

In our report,<sup>1</sup> dated March 19, 1906, we stated that the works projected on the American side at Niagara Falls would produce 342,000 horsepower, besides a small amount on the Erie Canal, and would consume about 28,000 cubic feet of water per second, while those projected on the Canadian side would produce 432,000 horsepower, besides a small amount on the Welland Canal, and would consume about 36,000 cubic feet of water per second. We thought that the amount on the American side could be reduced to 242,000 horsepower, using 18,500 cubic feet of water per second, without inflicting undue hardship upon invested capital, but we doubted the expediency of attempting to withdraw the other rights acquired by the power companies at Niagara Falls. These views were adopted by Congress with qualifications.

In the act approved June 29, 1906, the amount of water to be diverted on the American side was cut down to 15,600 cubic feet per second in the first instance, but with the provision that additional amounts may be diverted after an interval of not less than six months if it be found that that can be done without detriment to Niagara Falls or the river.

The amount of power to be generated on the Canadian side was cut down from 423,000 to 350,000 horsepower, the control of Congress in the matter arising from the fact that a very large percentage of the Canadian output must, under present conditions, find a market in the United States. Under no circumstances is the total to be increased, but the amount which may be transmitted to the United States is to be diminished as the amount consumed in Canada shall increase. In this sliding scale a limit is fixed which divides the permits into two kinds, one of which may possibly be expected to have somewhat more permanency than the other, viz, permits to transmit electrical power from Canada into the United States to the aggregate amount of 160,000 horsepower, and revocable permits for the transmission of additional electrical power to the extent just indicated. It appears to us that this distinction was

<sup>1</sup> Printed in Senate Document No. 242, Fifty-ninth Congress, first session.

made for the purpose of giving a little more assurance of permanency to certain of the permits than it was possible to give to all of them and not for the purpose of trying an experiment as to the effect upon the Falls of the diversion of a quantity of water so indefinite in amount. This view seems confirmed by the fact that the maximum amount allowed on the Canadian side, 350,000 horsepower, is about 83 per cent of the amount mentioned in the report, 423,000 horsepower, while the amount allowed on the American side, 15,600 cubic feet per second, is about 84 per cent of that mentioned in the report, the percentage of reduction thus being practically the same in the two cases. We see, no reason why revocable permits for the transmission of power from Canada into the United States, additional to the 160,000 horsepower first to be authorized, should not be issued without delay if application for such permits be received.

The law provides for the issuance by the Secretary of War of four kinds of permits, viz:

1. Permits to divert water from the Niagara River on the American side to an aggregate amount not exceeding 15,600 cubic feet per second.

2. Revocable permits to direct additional water from the Niagara River on the American side to such amount, if any, as shall not injure the river as a navigable stream or as a boundary stream and shall not injure the scenic grandeur of Niagara Falls, but no such permits shall be issued until approximately the 15,600 cubic feet per second mentioned above shall have been diverted for a period of not less than six months.

3. Permits to transmit electrical power from Canada into the United States to the aggregate amount of 160,000 horsepower.

4. Revocable permits for the transmission of additional electrical power from Canada into the United States, but in no case shall the amount included in such permits, together with the 160,000 horsepower mentioned above and the amount generated and used in Canada, exceed 350,000 horsepower.

Applications have been received for permits of the first and third kinds, but in this report Capt. Kutz confines himself to a consideration of those relating to the transmission of power from Canada into the United States, deferring to a future report all that concerns the diversion of water on the American side. He defers also a consideration of the question of granting transmission permits for amounts additional to the first 160,000 horsepower, expressing the opinion that it is "the intent of the law to delay the issue of such permits until it is known what appreciable effect, if any, will be produced on the Falls by the diversion of the amount of water that will be used under the first limitation." As above stated, we do not concur in that opinion, but the fact that no applications have been received for permits of this kind is sufficient reason for not discussing them at this time.

Applications for the transmission of power have been received from four companies, including the International Railway Co., whose rights under Canadian law to transmit power to the United States are in dispute and whose claims are small compared with those of the other companies. Capt. Kutz recommends that no permit be issued to that company at this time, but that 2,500 horsepower be reserved for the present in order that it may be possible to grant the company a permit for that amount hereafter should the controversy over its rights under the Canadian laws be decided in its favor. In that recommendation we concur.

There will remain 157,000 horsepower to be divided among the three remaining applicants. These applicants are the American transmission companies, but their interests are identical with those of the Canadian companies from whom they derive power and must be considered in connection therewith. They are:

1. Niagara, Lockport & Ontario Co., taking power from the Ontario Power Co., applying for 90,000 horsepower.

2. Electrical Transmission Co., taking power from the Electrical Development Co., applying for 62,500 horsepower.

3. Niagara Falls Power Co., taking power from the Canadian Niagara Power Co., applying for 121,500 horsepower.

The application of the Niagara Falls Power Co. is for 11,500 horsepower more than the capacity of the works from which it is to derive power when completed as designed. The other companies ask for one-half the capacity of the works furnishing the power when completed as designed. The total amount asked for is 274,000 horsepower.

Capt. Kutz has spared no pains in the collection of all the facts which have a bearing upon the question of how the available amount shall be divided

among the three companies. After a careful consideration of the amounts of capital invested in the power plants, the amounts required to complete the works as designed, their capacity as completed under expenditures now made or pledged, their capacity as designed, the amounts of capital invested in transmission lines in the United States or on Canadian soil to connect with the United States, the contracts made for furnishing and receiving power, and other data, he concludes that there is no sufficient reason for discrimination between the companies except their relative ability to command the Canadian market. The Electrical Development Co. was organized with that market prominently in view and is able to obtain a sale there of about 25,000 horsepower more than either of the other companies. Its claim to the American market is diminished by that amount. If the quantity allotted to that company be 37,500 horsepower there will remain 120,000 horsepower to be equally divided between the Ontario Power Co. and the Canadian Niagara Power Co., giving them 60,000 horsepower each. We believe this to be an equitable division of the power available and we join with Capt. Kutz in the recommendation that permits for the transmission of power to the United States be granted to:

Horsepower.

The Niagara, Lockport & Ontario Co. from the Ontario Power Co.....	60,000
The Electrical Transmission Co. from the Electrical Development Co.....	37,500
The Niagara Falls Power Co. from the Canadian Niagara Power Co.....	60,000

Yours, very respectfully,

O. H. ERNST, *Chairman.*  
 GEORGE CLINTON, *Member.*  
 E. E. HASKELL, *Member.*

Hon. W. H. TAFT,  
*Secretary of War.*

REPORT BY CAPT. CHARLES W. KUTZ, CORPS OF ENGINEERS.

WAR DEPARTMENT,  
 OFFICE OF THE CHIEF OF ENGINEERS,  
 Washington, August 15, 1906.

GENERAL: 1. In compliance with the written orders of the Secretary of War, dated July 14, 1906 (copy attached marked A), and your subsequent oral instructions, I have the honor to submit herewith the following report upon the existing power situation at Niagara Falls:

2. The information called for by the Secretary of War concerns not only the power companies now diverting water on the American side, but also those on the Canadian side who are seeking through their associated transmission companies to import power into the United States. This latter information, being of more immediate importance, will be considered first.

3. The four Canadian companies applying directly or through their transmission companies for permits to import power are the Ontario Power Co., of Niagara Falls; the Electrical Development Co., of Ontario (Ltd.); the Canadian Niagara Power Co., and the International Railway Co.

*The Ontario Power Co.*

4. This company was incorporated by an act of the Dominion Parliament in 1887, and is not limited by its statutory rights to the production of any given amount of power. All its plans, however, are subject to the approval of the commissioners for the Queen Victoria Niagara Falls Park. The present approved plans were designed for the production of 180,000 electrical horsepower, using its Niagara River intake. In addition to its Niagara River rights, the Ontario Power Co. has a franchise for taking water from the Welland River, but beyond the purchase of a limited amount of land for right of way for the intake tunnel or canal this franchise has not yet been exercised.

5. The Niagara River plant as designed consists of headworks located above the first line of rapids, three main conduits or flumes 6,000 feet or more in length, leading the water through the park to a point below the Falls, thence by penstocks in tunnel through the cliff to the generating station in the gorge, and lastly a distributing station or transformer house situated on the high bluff directly above.

6. The headworks are constructed for the full development—that is, 180,000 electrical horsepower. Only one of the three main conduits has been built, and this has a capacity sufficient, it is claimed, to supply water to 6 generating units, 3 with a capacity of 10,000 electrical horsepower each, and the remaining 3 with a capacity of 12,000 electrical horsepower each. The valve chamber of No. 1 conduit is complete for 7 units except 3 valve motors, and rough excavation has been made for the valve chamber of No. 2 conduit in which an eighth valve has been installed, so that No. 7 can be operated either from No. 1 or No. 2 conduit. Excavation for the power house is complete for 8 units, the foundation and structure for 6 units. The central or main portion of the transformer house was designed and built for the control of 22 units, the number originally planned for the completed plant. The wings of the transformer house as now built have a capacity for 8 transformer sets, corresponding to 8 generator units. Four transformer sets are now installed. In addition, room is provided in the central part of the building for the passage of 4 additional transmission lines without change of voltage.

7. The books of this company show an expenditure of \$5,142,000, exclusive of rentals and rights, with \$400,000 due on uncompleted contracts. This total expenditure on power plant of \$5,542,000 will complete the installation of four units. The installation of two additional units, orders for which have recently been given, will require an additional expenditure of \$315,000. Of the four units now installed, three are ready for service, and the fourth lacks only a minor part to make it complete. The order for the fifth and sixth units calls for delivery within 12 months. The estimate furnished by the company of the cost of completing the approved design is \$6,500,000.

8. In addition to the expenditures of the Ontario Power Co. itself, there has been expended by the Ontario Transmission Co. nearly \$1,000,000 in real estate, transmission lines, stations, etc. For financial reasons a separate organization is maintained, but the company is practically identical with the Ontario Power Co. It owns an interest in the transformer house and owns all the transmission lines in Canadian territory. The Ontario Power Co. has Canadian contracts for about 6,000 horsepower, with the option on the part of the purchaser to increase the amount to about 13,000 horsepower. It has a contract with the Niagara, Lockport & Ontario Power Co. to deliver at the international boundary, for use in the United States, 60,000 horsepower, with the option on the part of the purchaser of increasing the amount to 180,000 horsepower. The latter contract is dated July 18, 1904, and provides that the 60,000 horsepower shall be delivered on or before January 1, 1907, with the option on the part of the purchaser of taking 60,000 additional horsepower January 1, 1911, and the third 60,000 horsepower on January 1, 1915.

9. The Niagara, Lockport & Ontario Power Co. is building switching and transforming stations and constructing transmission lines for the purpose of carrying out its contract with the Ontario Power Co. In furtherance of its plans the company has acquired a private right of way containing about 3,200 acres of land, with an unbroken strip 300 feet wide from the Niagara River to Lockport, a distance of 17 miles; thence 200 feet wide to the suburbs of Rochester, a distance of 55 miles; thence 100 feet wide from the suburbs of Rochester to Fairport, a distance of 12 miles. In addition, a similar private right of way owned in fee simple, 100 feet wide, has been acquired from Lockport southward through the suburbs of Buffalo to the Lackawanna Steel Co.'s plant, a distance of 27 miles. The company has erected two transmission lines from the international boundary to Lockport, each with a capacity of 30,000 horsepower. From Lockport to Syracuse a single line, partly over the right of way of the West Shore Railroad, has been completed, with a capacity of 10,000 horsepower, and a second line of greater capacity is under construction. On the double line from Lockport to Buffalo work is in progress, 60 per cent of the poles having been erected. Each of the Buffalo lines is to have a capacity of 30,000 horsepower.

10. The books of this company show an expenditure of \$2,785,000, of which \$1,200,000 is represented by right of way and \$1,162,000 is represented by construction. The Niagara, Lockport & Ontario Power Co. has actually executed contracts which call for the delivery within the near future of 6,000 horsepower, with provision for fixed increases at intervals varying from three months to three years, so that at the expiration of that time they will have a firm contract with their present customers for 14,240 horsepower, with options on the part of the purchasers which give them the right to increase the amount to 70,000 horsepower. The first of these contracts is dated June, 1905; three



others in the fall of 1905, one in March, two in April, and two in May, 1906. In addition the company claims to have contracts verbally closed for 13,000 additional firm horsepower, and negotiations pending for 25,000 firm horsepower, making a total of 52,000 horsepower, for which they hope to have a market in the near future. The optional amounts named in these contracts and negotiations aggregate 166,000 horsepower. At the time of the examination this company was actually transmitting to the United States 700 horsepower.

*The Electrical Development Co.*

11. This company was incorporated by act of the legislature of Ontario (5 Edward VII, ch. 12), for the purpose of developing, distributing, and selling electrical power and for other purposes, but its charter gives it no specific right to take water from the Niagara River or its tributaries. To this company was assigned an agreement which three citizens of Canada had entered into with the commissioners for the Queen Victoria Niagara Falls Park, by virtue of which it is authorized to take from the Niagara River water sufficient to develop 125,000 electrical horsepower. The amount of water for this purpose is computed to be 10,800 cubic feet per second.

12. In pursuance of this agreement, a plant has been designed and partially constructed that will be capable of producing the full amount of power authorized. The headworks are completed except for the removal of the cofferdam, while the wheel pit and tailrace tunnels are practically completed for the full development. Contract has been entered into for the construction of two-thirds of the power-house structure. The metal work of this part of the building is practically completed and the stonework 50 per cent completed. This will provide cover for 7 of the 11 units that are projected, each of which is designed with a capacity of 12,500 electrical horsepower. Only four generating units have actually been ordered. Two of the four have been delivered at the power house and are now being installed; one of the two was being made ready for test at the time of the examination, and unless some unforeseen accident occurs should be ready for service during the month of September, and the other three at intervals of six weeks to two months thereafter. The transformer house as constructed is for 5 units. One bank of three transformers is on the ground, a second bank was scheduled for shipment August 1, and the third bank August 15. By its headworks, wheel pit, and tailrace development the company is committed to the installation of 11 units, by its power house to the installation of 7 units, and by its contracts for machinery to the installation of 4 units.

13. The books of the company show an expenditure to July 1, 1906, on the power plant of \$4,500,000. The liabilities, incurred and unpaid, for completing the installation of 4 units are \$1,760,000, a total investment in plant of \$6,300,000. To complete the installation of 11 units would cost \$1,576,000.

14. This company has affiliated with it the Toronto & Niagara Power Co., organized for the purpose of transmitting power from Niagara Falls, Ontario, to Toronto. Its transmission lines, which, except for a short section, are completed, will have a capacity of 20,000 horsepower, and represent an investment of \$1,870,000, with \$750,000 required for completion. The demands on this company from Toronto and intermediate territory will probably aggregate between 30,000 and 40,000 horsepower. The Electrical Development Co. was organized primarily for the purpose of furnishing power to Canadian points, and its arrangements for selling power in the United States are in a more or less embryonic state. For distribution in the United States there was organized the Electrical Transmission Co. of Niagara Falls, a corporation chartered under the laws of the State of New York. This company at present is a mere holding company, keeps no books, and all the expenditures made in its name have been advanced by the Electrical Development Co. The books of the Electrical Development Co. show an expenditure on this account of \$246,000, which was used for the purchase of an interest in the Niagara Falls Gas & Electric Light Co., Niagara Falls Gas Co., and the Albion Power Co., and for the purchase of real estate in Niagara Falls, \$40,000 being the amount of the last item. This investment, together with the holdings of the "Nicholl syndicate," a group of men who control the Electrical Development Co., gives control of these subsidiary companies to the power company.

15. The value of the properties thus controlled is approximately \$1,000,000. The Niagara Falls Electrical Transmission Co. also has an agreement with the International Railway Co. looking to the building of a bridge crossing Niagara River to be owned jointly by the two companies, across which it is proposed to

convey power that is sold by the Electrical Development Co. to the Niagara Falls Electrical Transmission Co. Negotiations with this company (I. R. R. Co.) also contemplate the granting to the transmission company of a right of way for its transmission lines over the right of way now being acquired by the railway company between Niagara Falls and Buffalo. This agreement with the International Railway has not yet assumed the form of a written contract. For carrying its transmission lines to Rochester this company proposes to use the right of way of the Buffalo, Lockport & Rochester Electric Railway. There is no contract to this effect, but as the Buffalo, Lockport & Rochester Railway is controlled by the Nicholl syndicate above referred to, there is a community of interest. The Buffalo, Lockport & Rochester Railway is now under construction, the contract for grading a double-track road and for the construction of a single-track road having been entered into with J. G. White & Co., contractors, on May 14, 1906, at a cost of \$2,250,000. In addition to the above the Electrical Transmission Co. has acquired franchises in its own name in seven cities and towns in western New York for the sale and transmission of power, and through the Niagara Falls Gas & Electric Light Co. and the Albion Power Co. it controls 20 other such franchises. The Niagara Falls Electrical Transmission Co. has not executed any contracts for the delivery of power, but expects that its allied interests will require 17,500 horsepower. This expectation is based on the use by the Niagara Falls Gas & Electric Light Co. of 3,000 horsepower, though the amount now distributed by this company is about 100 horsepower. It also includes an estimate of 4,000 horsepower for the Buffalo, Lockport & Rochester Railway Co. This amount is based on a double-track road, while the contract for the construction of the road calls for only a single track at the present time. The company also submitted confidentially a list of corporations who had made inquiries with reference to the purchase of power from the Niagara Falls Electrical Transmission Co., together with the amount of power which they would probably require. This list aggregates 141,000 horsepower. It is needless to say that these inquiries involve no obligation on the part of either party.

*The Canadian Niagara Power Co.*

16. This company was incorporated by an act of the Legislature of the Province of Ontario in 1892, and is not limited by its statutory rights to the production of any given amount of power. All its plans, however, are subject to the approval of the commissioners for the Queen Victoria Niagara Falls Park. The present approved plans were designed for the production of 121,000 horsepower—that is, 11 units each with a capacity of 11,000 horsepower. Regarding one of these units as a spare, so as to put it on the same basis with the two companies previously described, the nominal capacity of the completed plant may be taken at 110,000 horsepower. This company also claims the right to double this plant, basing the claim on that clause of the original charter which limits its occupation of park lands to a length of 1,200 feet, the length of the power house now designed being 600 feet. As this right has in no way been exercised, and as it could not be exercised without the approval of the park commissioners, it need not be further considered.

17. This plant operates under an effective head of 141 feet, and for the development of 110,000 horsepower will require about 9,500 cubic feet of water per second. The headworks consist of a head canal with a fore bay 600 feet wide extending the whole length of the power house. The headworks, gates, wheel pit, and tailrace tunnel are completed for the full development. Five generating units are completely installed and a portion of the power house sufficient to cover them has been completed. The transformer station is also of sufficient size to accommodate 5 units. By its headworks, wheel pit, and tailrace development, the company is committed to the installation of 11 units; by its power house and transformer house to the installation of 5 units.

18. The books of the company show an investment to July 1, 1906, including liabilities incurred and unpaid for completing the installation of 5 units, amounting to \$6,250,000. For comparative purposes the value of the franchise, given as \$900,000, should be deducted, making the cost of the installation \$5,350,000. To complete the installation of 11 units would cost probably \$1,250,000.

19. This company is an allied company of the Niagara Falls Power Co., and save for the maintenance of a separate organization, is identical with it. It expects to market practically all its power through the Niagara Falls Power Co. or through the latter's agents. An underground conduit, with a capacity of 128,000 horsepower, connects it with the plant of the Niagara Falls Power Co.,

and cables with a capacity of 32,000 horsepower are now installed. A separate transmission line, capacity 25,000 horsepower, running for 16 miles along the west shore of the Niagara River to Fort Erie is under construction, together with the towers required to carry the cables across the river to Buffalo. For its transmission lines it has actually expended or is committed by contract to the amount of \$480,000.

20. It is now delivering 1,340 horsepower to Canadian tenants, who have the option of increasing the amount to 4,237 horsepower. At the present time there is no definite contract covering the sale of the power intended for delivery in the United States. This is explained by the intimate financial relations existing between the Niagara Falls Power Co. and the Canadian Niagara Power Co. At the time of the examination it was actually transmitting to the United States about 16,000 horsepower, but the combined load sheet of the two companies shows that the maximum amount thus far delivered to consumers is about 85,000 electrical horsepower.

*International Railway Co.*

21. This company is incorporated both in the State of New York and in the Dominion of Canada. In its first capacity it owns and operates all the electric railways in the city of Buffalo and adjacent towns, and the city of Tonawanda, Erie County, and the cities of Lockport, Niagara Falls, and the intervening territory in the county of Niagara, N. Y. Under its Canadian charter it owns and operates an electric railway along the shore of Niagara River from Chippewa to Queenstown. It also owns two bridges over the Niagara River, one just below the Falls and one at Lewiston, over both of which it has specific legislative authority to transmit power.

22. Its power plant is located in the Queen Victoria Niagara Falls Park, which plant was acquired when it acquired the property and franchise of the Niagara Falls Park and River Railway Co. In acquiring this railroad it paid for the equity therein \$733,000, and assumed a bonded indebtedness of \$600,000, making a total investment of \$1,333,000. It is claimed that this value was fixed largely by the power rights of the Niagara Falls Park and River Railway Co. At the time of its acquisition the power plant represented a cash outlay of \$141,000. Since that time further expenditures have been made upon its power house and equipment of \$125,000, so that the actual investment of this company in its power property at Niagara Falls, Ontario, is about \$265,000. With the machinery now installed 3,600 electrical horsepower can be generated, the effective head being 68 feet. Under its charter none of the power may be sold, and its use is limited to operating and lighting the railway, the Canadian division of which now uses from 800 to 1,200 horsepower. The company claims the right to transmit the balance to the United States for use on that portion of its system. This right, however, is questioned by the commissioners of the Queen Victoria Niagara Falls Park, and in their annual report for 1905 they say that they can not see their way clear to approve the plans for the transmission of this power through the park. The matter has been referred to the Dominion Government for decision. While it is understood that some progress has been made toward a solution, final action has not yet been taken.

23. The company, in its application to transmit power to the United States, asks for 8,000 horsepower, the intention being to enlarge the power plant for this purpose, at an estimated cost of \$150,000. Pending the determination by the Dominion Government of this company's rights, it is believed that no permit should be granted to them. Having in mind, however, the fact that they are now generating 2,500 horsepower more than they can use on the Canadian side, and the fact that the transmission of this power to the United States would result in an estimated saving of \$30,000 a year, it would seem equitable to reserve 2,500 horsepower for the present of the 160,000 horsepower for which permits can be granted, so that a permit for this amount could be issued in case the present controversy is decided in favor of the railway company.

24. The principal facts with reference to the three big Canadian companies are tabulated as follows:

	Ontario Power Co.	Electrical Develop- ment Co.	Canadian Niagara Power Co.
Expenditures to date in power plants, exclusive of rights and franchises.....	\$5,142,080	\$4,500,000	\$4,072,080
Amount required to complete existing contracts and orders.....	\$715,000	\$1,700,000	\$678,000
Amount required to complete plants to projected size.....	\$8,500,000	\$1,576,000	\$1,250,000
Effective head..... feet.	180	135	141
Capacity of generating machinery actually installed, electrical horse- power.....	42,000		55,000
Nominal capacity of generating machinery installed and ordered, electrical horsepower.....	68,000	50,000	55,000
Nominal capacity of projected plants..... electrical horsepower.....	180,000	125,000	110,000
Amount invested and obligated for Canadian transmission lines.....	\$1,000,000	\$2,620,000	\$420,000
Probable sale of power in Canada..... horsepower.....	10,000	30,000	5,000
Amount of water required for machinery installed and ordered, in- cluding exciter sets—efficiency of the unit being taken at 75 per cent..... cubic feet.....	4,250	4,300	4,500
Amount of water required for plants as projected..... do.....	11,700	10,800	9,500
Actual expenditures by their associated American transmission companies.....	\$2,785,000	\$246,000	\$600,000

<sup>1</sup> The major portion of this amount has been expended in the construction of transmission lines intended for delivery of power to the United States distributing companies.

<sup>2</sup> This does not include any expenditures by the Nicholl Syndicate.

25. If these companies were limited in their output to the capacity of the generating machinery now actually installed and ordered, their investment in power plant, exclusive of franchises per horsepower developed, would be approximately as follows:

Ontario Power Co.....	\$89.00
Electrical Development Co.....	125.00
Canadian Niagara Power Co.....	97.00

If permitted to develop to the limit of their approved plans the investments in power plant per horsepower developed (nominal capacity) would be:

Ontario Power Co.....	\$68.00
Electrical Development Co.....	62.00
Canadian Niagara Power Co.....	60.00

These figures must be considered as only approximately correct, owing to the different methods of cost distribution used by the several companies. The aim has been to take the actual cost of the power plants, exclusive of rights, rentals, and franchises. Regardless of their absolute accuracy, or even their relative accuracy as between the three companies, they serve to show the extent to which the companies by their expenditures and contracts have committed themselves, and also the approximate losses which they will sustain if they are limited to the production of an amount of power less than their projected capacity. All three of these power developments were undertaken in good faith several years ago and long before the agitation in Congress which led to the passage of the present law, and there is no evidence that any of their subsequent transactions were made with the object of securing rights which they had not always intended to claim.

26. The total capacity of the generating machinery installed and ordered for the three plants is 171,000 horsepower. The probable demand in the near future from Canadian markets will not exceed 40,000 horsepower, leaving 131,000 horsepower for sale in the United States. The granting of permits for this amount would permit the utilization to its full capacity of all machinery now installed or ordered, but would not permit any further development and would not afford a reasonable return on the moneys now invested unless the prices to the consumers were measurably increased. In order that such relief as is now possible may be afforded, it is recommended that permits be granted for 157,000 horsepower, the maximum amount under the first limitation, less 2,500 horsepower reserved for the International Railway Co.

27. The conditions surrounding the development of the Canadian power companies differ so materially that an exact statement of their relative rights to the American market is not possible. The Niagara, Lockport & Ontario Power

Co., the distributing agent in the United States for the Ontario Power Co., has expended a large sum in opening up a new market. The Electrical Development Co. started primarily to develop the Canadian market, and its plans for the American market have not yet been fully matured, while the plant of Canadian Niagara Power Co. is virtually an addition to that of the Niagara Falls Power Co. Considering alone the investments in power plant, there is no apparent reason why any distinction should be made between the power companies in the amount of power which they should be permitted to send into the United States. While the projected development of the Ontario Power Co. is considerably greater than that of the other two companies, this apparent advantage is balanced by the fact that the other two companies are more fully committed by expenditures already made to the complete development. If the relative investments of the three transmission companies associated with them for distribution in the United States are alone considered, the claims of the Niagara, Lockport & Ontario Co. are unquestionably superior to those of the other transmission companies. As the object of the law is to restrict, directly or indirectly, the amount of water diverted, it has been suggested that some weight should attach to the fact that the Ontario Power Co. makes greater use of the water that it diverts than either of the other companies. Each of the companies, however, fully utilizes the head incident to its geographical location, and any distinction in the matter of permits based on relative natural advantages would appear to be unjust.

28. The Electrical Development Co. had for its primary object the furnishing of power to various points in Canada, as is indicated by the construction of its Toronto line, yet the demand for electrical power in Canada within the economical radius is so limited as to make it unreasonable to suppose that this company had given no thought to the marketing of a part of its power in the United States. The Electrical Development Co. is planning to sell between 30,000 and 40,000 horsepower in Canada, which is probably from 20,000 to 25,000 horsepower in excess of what either of the other two companies will sell in Canada, a fact which should receive consideration in fixing the amount to be transmitted to the United States. On the other hand, any greater discrimination against the Electrical Development Co., which is owned almost wholly by Canadian capitalists (the other two companies being owned almost wholly by Americans), may give rise to a feeling of resentment on the part of the people of Canada and tend to retard the negotiation of a treaty between the two countries concerning the preservation of Niagara Falls.

29. The applications for permits made by the transmission companies are as follows:

	Horsepower.
Niagara, Lockport & Ontario Co., from the Ontario Power Co.....	90,000
Electrical Transmission Co., from the Electrical Development Co.....	62,500
Niagara Falls Power Co., from the Canadian Niagara Power Co.....	121,500

The application of the Niagara, Lockport & Ontario Co. is based upon the desire to secure a reasonable return on the investment already made, but considering the date named in its contract with the Ontario Power Co. for the delivery of the second block of 60,000 horsepower, i. e., January 1, 1911, and having in mind the fact that any production of power in excess of 60,000 horsepower means the construction by the Ontario Power Co. of a second conduit and a consequent expenditure of \$3,250,000, it is believed that a present limitation to 60,000 horsepower will not work undue hardship.

30. The application of the Electrical Transmission Co. contemplates the marketing of one-half of the total output of the Electric Development Co. Considering the situation of the latter company in the Canadian market and the limited extent to which the Electrical Transmission Co. has committed itself by its expenditures, a present limitation to 37,500 horsepower does not appear to be inequitable.

31. The plant of the Canadian Niagara Power Co. is intended to supplement that of the Niagara Falls Power Co., and a fair estimate of the rapidity with which its power will be marketed is found in the rate of growth in the past of the Niagara Falls Power Co. This has amounted to about 20 per cent in recent years, with a present output of both companies amounting to 85,000 horsepower. Assuming that the same rate of growth will continue, though in all probability it will be reduced owing to power which the other companies expect to market in this territory, it will be two or three years before the full capacity of the Canadian plant as now installed will be utilized. For these

reasons a present limitation to 60,000 horsepower will not, in my judgment, seriously interfere with its normal development.

32. If permits are granted for these amounts the Ontario Power Co. would be justified in installing a seventh unit as a spare, the Canadian Niagara Power Co. would be justified in installing two more units, one as a spare, making the nominal capacity of its plant 66,000 horsepower. The Electrical Development Co. would be justified in installing three more units, one of them a spare, making the nominal capacity of its plant 75,000 horsepower, half of which, the proportion asked for, it would be permitted to transmit to the United States. If each installs these units the relative investment in power plant, exclusive of franchise, per horsepower developed (nominal capacity) would be:

Ontario Power Co.....	\$92.00
Electrical Development Co.....	91.00
Canadian Niagara Power Co.....	87.00

33. Based upon what precedes, it is recommended that permits for the transmission of power to the United States be issued as follows:

	Horsepower.
Niagara, Lockport & Ontario Co., from the Ontario Power Co.....	60,000
Electrical Transmission Co., from the Electrical Development Co.....	37,500
Niagara Falls Power Co., from the Canadian Niagara Power Co.....	60,000
	<hr/> 157,500

In order that the various companies may proceed with this limited development, it is further recommended that permits for such amounts as may be authorized be issued without delay.

34. As to the question of granting transmission permits for amounts additional to the first 160,000 horsepower, it is believed to be the intent of the law to delay the issue of such permits until it is known what appreciable effect, if any, will be produced on the Falls by the diversion of the amount of water that will be used under the first limitation. If this interpretation of the law is correct, the granting of such permits will be a matter for the future, as it will be fully a year before the companies will be in a position to develop 160,000 horsepower, in addition to the amounts sold in Canada.

35. The information contained in this partial report was obtained from the parties interested and its important features verified by a personal inspection of the works and a general examination of the books and records of the various companies. These inspections and examinations were made July 20 to July 28, 1906, and descriptions of the power plants of the Ontario Power Co. (Appendix B), Electrical Development Co. (Appendix E), and the Canadian Niagara Power Co. (Appendix G), and of the transmission lines of the Ontario Transmission Co. (Appendix C), Niagara Lockport & Ontario Power Co. (Appendix D), and the Toronto & Niagara Power Co. (Appendix F), in greater detail than in the body of the report, are appended hereto. They were prepared by Mr. Earl Wheeler, E. E., who, with Mr. F. D. C. Faust, a representative of the Department of Justice, assisted in the examination. A photographic copy of a map of Niagara Falls, taken from a monograph prepared in 1904 by the Canadian Society of Civil Engineers, is also appended.

36. The preparation of that part of the report which concerns the diversion of water on the American side has been delayed by the nonreceipt of certain information, and will be submitted later.

Very respectfully,

CHARLES W. KUTZ,  
Captain, Corps of Engineers.

Brig. Gen. A. MACKENZIE,  
Chief of Engineers, U. S. A.

The CHAIRMAN. Is there any other gentleman present who desires to be heard briefly? Hearing no response, this committee will stand adjourned.

Thereupon, at 4 o'clock p. m., the committee adjourned until Tuesday, January 23, 1912, at 10 o'clock a. m.

COMMITTEE ON FOREIGN AFFAIRS,  
HOUSE OF REPRESENTATIVES,*Tuesday, January 23, 1918.*

The committee met at 10 o'clock a. m., Hon. William Sulzer (chairman) presiding.

The CHAIRMAN. The committee will hear this morning, Hon. Thomas Carmody, attorney general of the State of New York. Gen. Carmody, you may proceed.

**STATEMENT OF HON. THOMAS CARMODY, ATTORNEY GENERAL  
OF THE STATE OF NEW YORK, ALBANY, N. Y.**

MR. CARMODY. Mr. Chairman, I wish to thank you and the committee for the courtesy extended the State of New York in granting this hearing, so that the State could be represented, and to especially assure the committee of the grateful appreciation of this favor by the governor, who is particularly interested in the whole conservation proposition.

Our rights in this matter involved in the bill now before this committee, are somewhat intensified by the contemporary interest which the State of New York is taking in the conservation proposition. I need not tell you, I am sure, that for the purpose of formulating a policy, and for the purpose of asserting the rights of the State in hydraulic matters, the last legislature passed an act constituting what is called a conservation commission, with more particular reference to the administering of the surplus waters impounded by reason of the construction of the barge canal, and the impounding of waters in the streams and tributaries, for the purpose of feeding the barge canal. The proposition involved in the bill and in the administration of the powers under it, is at present somewhat crude in the minds of the officials of the State, but we do stand upon this proposition, and it is one that it seems to me is not fully recognized by the bill pending before this committee.

I have been shown two bills, one introduced by Mr. Smith, and the other by Mr. Simmons, both of which seem to proceed upon the right claimed in the National Government to control and distribute the water power in Niagara River. I contend that that is an assertion of a power that the Government does not have. The Government has only such powers as the Constitution gives it, and in respect to navigable streams—and this includes border streams—that right is limited to the control of those streams for purposes of commerce and navigation, and for military defense, neither of which purpose is asserted, and neither of which is furthered by the bills before this committee, or by any legislation which Congress has passed, bearing upon the Niagara Falls proposition.

Now, it will not take me very long to state the position of the State of New York, and it will not take me very long to furnish to this committee the authorities upon which the State rests in basing its contention for what it will ask for when we are through. The State claims to be the owner of the soil to the center of Niagara River, and consequently the owner of the water that passes over the American side of the Niagara River, subject only to the right of the National Government to control the waters of that river for the purposes of

navigation and for military defense. The right which the State owns in this river is no different, according to the decisions of the courts, from its right in rivers that are entirely within its borders, that are navigable, and the legal status of that right is so clearly established by the decisions of our courts that it is unnecessary to more than refer to them for the purpose of establishing its correctness. Now, the treaty between this country and Canada, under which this bill is apparently drawn, undertakes to exercise some national power, the extent of which I can not understand. I think we all understand that the Governments, the parties to that treaty, have the right to state their relative positions so far as the use and occupation of that river is concerned, for the purposes of navigation and for military defense.

That is alleged to be the purpose of the treaty, and there is nothing in the treaty that undertakes to carry out that power, which is the only power that our Government has to deal with that scheme. I am not assailing this treaty; I am just coming in a moment to what Congress is now asked to do under it.

The treaty states that it is passed for the purpose of settling disputes between the owners or claimants on either side of the Niagara River. Now, whatever the ownership of property on either side of the Niagara River may be, it rests, under the laws of the State, in either the State or some riparian owner, and is not a subject of national supervision or control. Now, the Burton Act, so called, undertakes to carry out specifically the powers that were intended to be conveyed by the treaty, by providing that we may take from the Niagara River a certain quantity of water—15,600 cubic feet per second. We say that that is a subject upon which the National Government has no right to legislate, except to go far enough to say that there has been released to the State of New York a certain quantity of water from our supervision and right of control for purposes of navigation and military defense; that when the Government has gone that far it has discharged its power and exercised the only governmental function which it possesses, the only power which it has over the waters of Niagara River, and under that bill you have stopped where we ask you to stop in whatever legislation you recommend, namely, that when it is specified as to how much water may be taken from the river on the American side, thereby releasing the control of the National Government to that point; then that must go to the party that owns it under the laws of our State and Nation, namely, the State of New York.

Mr. GARNER. General, let us suppose that some Member of the House should disagree with you as to the power or control over this water. What is your idea about the policy of the Federal Government stepping in and undertaking to say to a State how and under what conditions it shall regulate hydraulic power.

Mr. CARMODY. I say that is objectionable from two standpoints. In the first place it is the assertion of a power that does not exist, and it is undertaking to administer a policy that belongs to the State. It is made the right of the State in two respects, first, State ownership of said power, and, second, the right to administer that in trust for the common people.

The CHAIRMAN. That is fundamental.



Mr. GARNER. In reality it is an indictment against the State by the Federal Congress that it is not capable of conducting its own affairs.

Mr. CARMODY. Very truly that is so. The Burton Act goes further than that; it not only asserts the right to control the distribution of it, but to say who shall have it, and it provides that it shall only go to those owning the water power at the present time. In other words, it grants what, under the constitution of the State of New York, is an exclusive privilege. We are arguing against the folly of the National Government undertaking to exercise functions which it does not possess, and thereby invading the functions of the State, wherein the State has the means of administering, the right to administer, and a vital interest in the result.

Mr. FLOOD. What act does that?

Mr. CARMODY. The Burton Act.

Mr. FLOOD. The one that is on the statute books?

Mr. CARMODY. The one that is on the statute books now. We contend against the principle that the National Government has the right to distribute this water. Our position is that the National Government has the right to control the waters of Niagara River for purposes of navigation and for military occupancy, but for no other purposes; and where it does not restrict them for those purposes then the riparian rights are invoked, and those riparian rights include the right of ownership to the center of this stream and to the water that passes over it.

Mr. GARNER. What do you say to the proposition of the Federal Government having the right to formulate certain rules and certain conditions precedent to the taking of this water that the greatest amount of power may be derived from the use of it. For instance, I presume you will concede that the Federal Government would have a right to say that you could take only 20,000 cubic feet per second, and that it could designate the Secretary of War or some one else to see that that provision was adhered to. Could they go further and prescribe the engineering features of the plant in order to get the greatest power out of that 20,000 cubic feet?

Mr. CARMODY. Very clearly, they can not. Their function is simply as was pointed out, to decide how much we may take, that does not injure navigation. When they have decided that they have exercised the only power they have under the National Government, and every other right over that water is in the State of New York, or in some riparian owner, if any rights have privately been acquired to the use of the water. The right to limit the cost to the consumer, or to regulate the question of engineering, is one that belongs to the State government.

Mr. CLINE. Do you concede that the Federal Government has the right to establish any limitation upon the diversion? I think you do.

The CHAIRMAN. There is no question about that.

Mr. CARMODY. Oh, yes.

Mr. CLINE. It has the right to grant or withhold to any extent that meets its own discretion?

Mr. CARMODY. Yes; and that discretion——

Mr. CLINE. And would have the right to refuse any diversion at all?

Mr. CARMODY. Yes; in the exercise of this function. In other words, I think the proposition is more logically stated in this way,

that the State may continue to enjoy its riparian rights until the Government desires to exercise its authority for the purpose of navigation or military defense.

Mr. CLINE. The Government will reclaim it by simply asserting that no diversion shall occur?

Mr. CARMODY. Yes, sir.

Mr. CLINE. It is your position that while the Government would have the right to grant or withhold in the discretion of Congress—that the Government can not impose any condition upon its exercise.

Mr. CARMODY. I say it can not. The Government can only decide how much can be diverted, and that is the only control the Government has over it, and then the rights of the State are asserted to the further control, and that is fully competent to deal with the question you raise.

Mr. CLINE. I understood that that is your contention?

Mr. CARMODY. Yes; that is the contention. It comes to this point, further objection to the provisions of the Burton Act is idle, and I wish to assert it here—you are familiar with the provisions of this bill?

Mr. DIFENDERFER. Under the treaty, is the Government not morally bound to stop the pollution of international waters?

Mr. CARMODY. The pollution?

Mr. DIFENDERFER. Yes.

Mr. CARMODY. That, of course, comes under a different power of the National Government than the one we are discussing.

Mr. DIFENDERFER. It would have some control.

Mr. CARMODY. The two Governments would have the right to agree upon some sanitary policy of controlling that question of the pollution of the waters of boundary streams.

Mr. DIFENDERFER. If the Government should go further and infringe, as you possibly would say, upon the riparian rights of the State of New York in order to stop pollution, would you think they would have any power?

Mr. CARMODY. If it is a legal right, it must be founded upon some legal principle of Government.

Mr. DIFENDERFER. The State of New York, as I understand it, has perfect health laws, has it not?

Mr. CARMODY. Yes.

Mr. DIFENDERFER. Now, has the State ever made any exhaustive investigation of the waters of Niagara in regard to that question?

Mr. CARMODY. In what respect?

Mr. DIFENDERFER. In this respect, as to whether scenic beauty has been destroyed?

Mr. CARMODY. Oh, yes; that is a common topic of investigation and conversation and denunciation in the State of New York. It seems to be agreed by the populace that lives there, and by the great mass of people who go there, that there has been no diminution of its scenic beauty, and, as I am informed, there will be none, if the State of New York is permitted to divert the use of those 20,000 cubic feet per second. But no one will claim, I assume, that this Government has the right to legislate for the purpose of preventing and protecting and enhancing the scenic beauty of property that belongs to the States. That is not alleged to be the purpose in the bill. It would not be a proper subject of legislation, for it is not

in the Constitution. I know it has often been advanced, but I do not believe that in the face of the aesthetic sentiment, that anything will be done to decrease the glories of that stream, and we will all be glad to see something done, and perhaps we will close our eyes to the exercise of power, if it were a little arbitrary, if it would prevent any desecration of the Falls. Bear this in mind, that the State of New York has done and is doing much to preserve the beauties of the Falls. The sentiment that has grown up against the desecration of the Falls shows how the people estimate the importance of preserving for posterity the grandeur of that most noble of Nature's works.

Mr. FLOOD. The Government has exercised jurisdiction under the Burton Act for the past six years?

Mr. CARMODY. Yes, sir.

Mr. FLOOD. Have the power companies questioned the authority of the State of New York up to this time?

Mr. CLINE. The truth is that the State government has fully acquiesced in this assumption of power.

Mr. CARMODY. Apparently the State acquiesces by not asserting it, and we found that the same thing was attempted to be done elsewhere in the State, and I am informed in other places, namely, the assertion of the right on the part of the National Government to control the hydraulic power of the States. We have in the Hudson River the same proposition. There is a specific appropriation for the building of a dam in front of Troy, there having been one there for some time, where waters were impounded, and accompanying the passage of the act were reports from the engineers of the War Department, recommending that the riparian rights should be turned over to the National Government before the appropriation was made available, and incorporated in the appropriation was that condition that the appropriation is not available until the riparian rights have been exterminated, and the canal board undertook to do that by rescinding and canceling the existing leases for power. The present administration has taken a stand against that. They have revoked that resolution, and we stand upon this right, that the State of New York owns this water power, so that if there has been any acquiescence in the State of New York in that policy in the past, that is so no longer.

Mr. CLINE. Was that not made a condition of the appropriation to improve the river, provided certain rights should be restored to the Government?

Mr. CARMODY. Hardly that way, because it stated that a certain amount is directed to be used when the rights were exterminated—

Mr. CLINE. A conditional grant?

Mr. CARMODY. Yes. That is simply asserting what is asserted in this bill, that the Government has the right to control the hydraulic resources of the State.

Mr. GARNER. The Government has the right to put a limitation on the appropriation, for the purpose for which it is to be used?

Mr. CARMODY. Very true. I am not questioning the exercise of that power, but there has been a policy to acquire the hydraulic power.

Mr. GARNER. You contend that if Congress had directly passed an act ordering the cancellation of these leases it would not have had that power?

**Mr. CARMODY.** Yes. Congress has no such power.

**Mr. GARNER.** And that power was lodged in New York.

**Mr. CARMODY.** That power was lodged in New York. The State of New York can not surrender it. It is lodged in the people of the State of New York, and the Government holds it only in trust. It is a sacred right which belongs to the people, and we are dealing with something here, the principles concerning which can not be changed by any action taken here or elsewhere. Now, to get down to the point of my discussion here, to the assertion of the principle that I am maintaining, which I find is familiar to the members of the committee, I trust there is no lawyer who has examined the legal principle I have asserted, namely, that the—

**Mr. CLINE.** There is no need to recite authorities on that proposition.

**Mr. CARMODY.** Yes, sir.

**Mr. CLINE.** What relation do you bear to the State?

**Mr. CARMODY.** Attorney general, and in company with Conservation Commissioner Moore and Mr. Bacon, of the Attorney General's office.

**Mr. FLOOD.** Do you contend that the United States Government should not permit the Secretary of War to have supervision over this diversion in order to protect navigation?

**Mr. CARMODY.** I do not contend that the United States Government should not safeguard the releasing of its control in any way that may be proper. What I am contending against is the principle in that bill that we must ask the Secretary of War to give to us what belongs to us as a matter of law. He should be required, upon an application from the proper authorities of the State of New York, it seems to me, to release the amount permitted to be diverted. I would think that would sufficiently safeguard the rights of the National Government; that when the proper authorities of the State of New York apply for the use of the balance of the power, 4,400 cubic feet per second, which we ask you to grant up to the full limit of the treaty, that it shall be the duty of the Secretary of War to sign the permits, provided, in his judgment, it does not interfere with the uses of the National Government.

**Mr. CLINE.** Is his judgement final on that question.

**Mr. CARMODY.** I think it is. I think that his power must be arbitrary. It certainly can not be questioned by the State if he chooses to say, "we need this for military defense or navigation," even though that may not be so. We can not question it.

**Mr. GARNER.** Let me get a distinct understanding about that. Congress decides that 20,000 cubic feet per second can be used without injuring navigation.

**Mr. CLINE.** Fifteen thousand six hundred, in this case.

**The CHAIRMAN.** That is the amount of water on the American side now being utilized.

**Mr. GARNER.** Congress decides that 20,000 feet can be diverted without affecting navigation or the military defense and we lodge with the Secretary of War the power to grant a permit. Is it your contention that the Secretary of War should arbitrarily say he will not grant any of these permits for any of this water because in his judgment it would affect navigation or military defense?

Mr. CARMODY. I am arguing the opposite side of that question, because we claim we have the right to enjoy that water as a natural right, but the National Government has the right to control it for purposes of navigation.

Mr. CLINE. We do it through an act of Congress.

Mr. GARNER. Although the Secretary of War has the power to issue a permit, he would not arbitrarily fly in the face of Congress.

Mr. FLOOD. You are making a concession to the other side.

Mr. CARMODY. I am not here to question the right of the National Government to do anything it believes it is doing in the interest of navigation. When you have passed that point—

Mr. CLINE. When you make that concession, do you not minimize the rights of the State that you have been talking about?

Mr. CARMODY. Not at all.

Mr. GARNER. If I understand, your position is that Congress has the right to say whether there shall be one or twenty thousand cubic feet per second, but that after that the power of Congress ceases and the State's rights begin.

Mr. CARMODY. Yes.

Mr. CLINE. I think we clearly understand that. Here is my proposition: If you concede to the Federal Government the right to establish the amount of diversion there, basing it upon the proposition that navigation will be affected or that the security of the country may be involved—if you concede that proposition, then the Federal Government has the right to authorize the diversion of 1 cubic foot or 20,000 cubic feet; if the Government now has the right to fix the amount, is not the importance of your State rights reduced to a minimum?

Mr. CARMODY. You have already stated how much may be diverted. I am starting in where you have stopped.

Mr. CLINE. But the Federal Government can at any time revoke the Burton Act. Is not that true?

Mr. CARMODY. Yes; but you have got to fight the riparian owners.

Mr. CLINE. What rights have the riparian owners?

Mr. CARMODY. The right of ownership.

Mr. CLINE. But what does the right amount to, if it is so difficult or impossible of assertion as you say?

Mr. CARMODY. It is the right to enjoy, until you have deprived them of it. I do not see how you are going to hurt them. They are drawing power from the river. You may say there can not be any power taken from the river, but you have got to settle that other question in another tribunal.

The CHAIRMAN. The Government has made a treaty, which is the supreme law of the land, and that treaty provides how much water can be taken by the Canadian Government and how much by the United States Government. The question before the committee is, who shall have the right to dispose of that water power, and whether there shall be any limitations upon its disposition, so far as the price of the power to the consumer is concerned.

Mr. FLOOD. There is another question, as to whether the Government will permit the 20,000 cubic feet per second to be diverted.

Mr. CLINE. If diversion is permissible.

Mr. GARNER. Let me ask one question in connection with that. Suppose that Congress should decide that there should not be a single

foot of water diverted on the American side, and should pass a law directing that none should be diverted, which would naturally seriously affect the power companies, would they have that right?

Mr. CARMODY. They have no such right.

Mr. GARNER. They outline in a bill that it is for the purpose of preserving the navigation in Lake Erie and pass a law prohibiting the diversion of another foot of water; you must assume they would have that power. Then, the only remedy that those companies would have would be a claim against the United States Government for such damage as might have occurred.

Mr. CARMODY. Or some legal proceedings.

Mr. CLINE. These are revocable permits, and would the Government involve itself in damages for doing what it is authorized to do?

Mr. GARNER. Some of these companies have been there for years and years, and have been given permits.

Mr. CLINE. They claim they derive the power from these permits.

Mr. CARMODY. Not necessarily, I believe.

Mr. CLINE. I should not want to concede that the only power we have is from the permit.

Mr. CARMODY. I would like to read the bill which we present here. It represents the idea of the State of New York in regard to this concession. [Reading:]

A BILL To give effect to the fifth article of the treaty between the United States and Great Britain, signed January 11, 1909.

*Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled.* In order to give effect to the fifth article of the treaty between the United States and Great Britain signed January 11, 1909: The United States hereby authorizes and permits the diversion within the State of New York of the waters of Niagara River above the Falls of Niagara, for power purposes, not exceeding in the aggregate a daily diversion at the rate of 20,000 cubic feet of water per second: *Provided, however,* That no water shall be diverted from said river at said point for power purposes except pursuant to written permits signed by the Secretary of War, who is hereby authorized and directed to issue such permits for the making of such diversion to said amount, to the State of New York, upon application therefor by its officials, thereunto duly authorized.

Said permits may be revoked by the Secretary of War at any time when in his judgment such revocation is deemed advisable for the protection of commerce or navigation or for military defense.

We contend that the bill recognizes the one right that the Government has and asserts the right that belongs to the State.

The CHAIRMAN. We will carefully consider the proposed bill.

Mr. FLOOD. The bill requires him to issue the permits, regardless of whether he may think that if he issues them they would be detrimental to navigation or the public defense.

Mr. CARMODY. He has the right to revoke them.

Mr. FLOOD. Suppose, before he issued them he thought that to issue them would be detrimental to navigation or to the common defense.

Mr. CARMODY. Of course you have the right—

The CHAIRMAN. In this proposed bill, as I understand it, he has the right to issue the permits.

Mr. CARMODY. He must issue them.

The CHAIRMAN. Please explain the last part of the bill?

**Mr. CARMODY.** That relates to the revocation.

Said permits may be revoked by the Secretary of War at any time when in his judgment such revocation is deemed advisable for the protection of commerce or navigation or for military defense.

You have given him the only authority he possesses by act of Congress. You authorize him to revoke permits.

**Mr. FLOOD.** If this proposed amendment should be enacted, the Secretary of War would be compelled to issue the additional permits notwithstanding he may believe that in doing that a radical injury to navigation might result. At present only 15,600 cubic feet are being diverted.

**Mr. CARMODY.** I should think that would be in the discretion of the Secretary of War.

**Mr. CLINE.** Unquestionably that is correct.

**Mr. CARMODY.** Therefore, we contend against the provisions now before you, which places in his discretion the arbitrary power to issue these permits, and thereby deny to New York its proper rights.

**Mr. DIFENDERFER.** As a matter of fact, General, there is not now diverted 15,600 cubic feet per second. It has been 13,800 feet.

**Mr. CARMODY.** Yes. I desire to state further that the rights of the State are in entire harmony with the other rights.

**Mr. FLOOD.** I do not so understand it, Mr. Difenderfer, from Gen. Bixby's statement.

**Mr. GARNER.** They were granted more, but only 13,300 feet are being diverted at present.

**Mr. FLOOD.** Eleven thousand on the other side.

**Mr. CARMODY.** We claim that, for the purpose of carrying out the policy of conservation which the State of New York has adopted, that you have the power of deciding how this power should go.

**Mr. CLINE.** I dislike to interrupt your argument, but how would you possess that power?

**Mr. CARMODY.** We have a conservation commission that now deals with the surplus waters that are impounded by the construction of the barge canal.

**Mr. CLINE.** Is that organized and operating?

**Mr. CARMODY.** Yes; some of the members are here. We do want to be permitted to exercise some control over the permits granted and to fix a maximum price to the consumers of that power. We say that if the franchise is granted by the State of New York, therefore the State has the right to limit the charge that the companies may make. We have no such right without contending against the principles which you have inserted in the Burton Act, and we have nothing to say about the manner in which that power, which is very important to us, is administered.

**Mr. CLINE.** I suppose the regulation of rights would be committed to your public-service commission?

**Mr. CARMODY.** Practically; but the administration of water power goes by specific provisions of our State law to the conservation commission.

**Mr. GARNER.** You have some idea with reference to the public opinion of your State in regard to the power of this commission to fix prices.

**Mr. CARMODY.** The conservation commission?

**Mr. GARNER.** The public-service commission.

**Mr. CARMODY.** I do not know much about it. It is certainly sustained by popular sentiment, and I think popular sentiment has asked to have it further extended to all corporations. I think the principle underlying it is popular and is growing in popularity, I believe. The control that comes in here, of course comes under another power of the National Government, and we have nothing to say about it. I am simply here to ask you to deal with us upon our natural rights and privileges as to this hydraulic question; but bear in mind that our interests are in harmony with those of every power company at the Falls. We are not going to confiscate anything; we are not going to deprive them of any rights they have by reason of the riparian ownership or by reason of the terms granted by the Secretary of War. We want these 4,400 cubic feet stripped of all these complications. We want you to realize that and to say to us, "You may administer it, with the right in the National Government to reclaim."

**Mr. GARNER.** The people are interested in the questions of whether they should be permitted to buy their power in Canada, and you are also interested in the question as to whether the Federal Congress shall fix the price, or your public-service commission?

**Mr. CARMODY.** Yes.

**Mr. GARNER.** You are also interested in the question about the conditions which shall be imposed upon power imported from Canada?

**Mr. CARMODY.** We are interested, but I do not think they should be in the same bill. The transmission of current comes under another power from the exercise of your power here. Here you are dealing with the assertion of your right to control navigable streams.

**The CHAIRMAN.** If it were not for the provision in the Burton Act limiting the amount of power to be brought into the State of New York to 100,000 horsepower, the Canadian Government—

**Mr. CARMODY.** The State of New York ought to be permitted to get a revenue the same as for any other franchise for this vast power which is being carried two-thirds the way across the State. We tax every other corporation, and we can not touch that, because you have said they can take it into our State and send it across the State, and charge the people as they see fit. You have prevented our control over matters that belong entirely to us.

I thank you, gentlemen, and shall be glad to answer any other questions.

**Mr. LEVY.** You claim that the Secretary of War shall be permitted to issue permits to exercise rights that belong to the State of New York?

**Mr. CARMODY.** I think he should be compelled to issue them.

**The CHAIRMAN.** To those designated by the State?

**Mr. LEVY.** That right belongs to the State of New York?

**The CHAIRMAN.** Yes.

**Mr. CARMODY.** When you say that we can take 20,000 cubic feet you have said all you can say. The rest belongs to us.

**The CHAIRMAN.** In your opinion, if Congress should pass this proposed bill submitted by you on behalf of New York, it will grant to the State of New York all it desires?

**Mr. CARMODY.** Yes. It may not be in proper form. I did not expect to represent the State here, but we got our views together and that represents them.



The CHAIRMAN. The State of New York, as I understand it, General, is in favor of taking the maximum amount of water on the American side that is provided for in the treaty?

Mr. CARMODY. Yes; we are.

The CHAIRMAN. In your opinion that would not destroy the scenic beauty of Niagara Falls?

Mr. CARMODY. We are very sure about that.

The CHAIRMAN. The State of New York has no objection to wiping out the limitation now imposed by the Burton law as to the amount of power coming in from Canada. All the State of New York wants is the power to regulate the price to the consumers.

Mr. CARMODY. Yes.

The CHAIRMAN. There being no Federal act prohibiting it, the State would have the right?

Mr. CARMODY. Yes.

Mr. GARNER. I just want to ask you, suppose the Burton Act was repealed—it expires on the 1st of March—and Congress did not pass any law with reference to the importation of power from Canada, they would have, under the general law, the right to bring in that power?

Mr. CARMODY. Not without the permission of Congress. They could not get in here and exercise a franchise, it seems to me, certainly not with the permission of the State of New York.

Mr. GARNER. There is no law on the statute books which I know anything about prohibiting the importation of power from foreign countries. When they get in, it would be under the jurisdiction of the State of New York, so if Congress does not say a word about it, New York would have just what it wants.

Mr. CARMODY. We would have this complication, that the Constitution says that no State shall interfere with interstate commerce, or make laws—

Mr. GARNER. Then your contention is that it would take an act of Congress to give your State jurisdiction?

Mr. CARMODY. That clears away that right.

Mr. FLOOD. Would it not be rather difficult to fix prices, when the public-service commission could not go into Canada and find out the cost of production?

Mr. CARMODY. You are asking me something that is in regard to an administrative matter, not legal.

Mr. CLINE. Suppose Canadian operators should refuse to disclose the information?

Mr. CARMODY. I think we would reciprocate—I think the law of reciprocity would be quite effective. We would say you can not transmit your power.

Mr. DIFENDERFER. Such a decision as that would be in favor of Canada. Canada would be benefited.

Mr. CARMODY. I would not want that kind of benefit.

Mr. DIFENDERFER. Would not the effect be this, that if they kept the electricity they manufactured on the other side, it would encourage factories being built there, because of the fact that they could produce power and sell it to these companies very much cheaper than on the American side?

Mr. CARMODY. It may be so.

**Mr. DIFENDERFER.** Then would it not be to their benefit to keep their power?

**Mr. CARMODY.** I think it is beneficial to them to come over and charge their present prices.

**Mr. FLOOD.** Have you considered the provision in the Smith bill in section 2, in reference to the limitation on the charge on power imported from Canada?

**Mr. CARMODY.** I have not given any particular attention to it, because I am not here to discuss the power question. There is another department of the Government whose territory I do not wish to invade, which deals with that.

**Mr. SHARP.** What would be the position of the State administration toward the governing of rates of this imported power, should that be consented to?

**Mr. CARMODY.** As I said, the public service commission is the department that deals with that. I have no authority to speak for them here. I do not know what their policy would be.

**Mr. SHARP.** Do you understand there would be competition between the power imported and the power on this side of the line?

**Mr. CARMODY.** I am not prepared to speak on that subject. I do not want to be put in the position of expressing the views of an administration for which I have no authority to speak.

**Gen. GREENE.** You have stated that the power from Canada is being transmitted two-thirds of the way across the State. Is your idea that a foreign corporation transmits that power?

**Mr. CARMODY.** It is transmitted from Canada, from a foreign country. I undertook to answer some questions here in regard to it. What I have tried to say is that the State of New York should have the right to regulate the transmission of that power across the State, and control the price of distribution.

**Gen. GREENE.** The State of New York has that right at this moment.

**The CHAIRMAN.** I think so—especially to regulate the price to consumers.

**Mr. CARMODY.** It would have, if the National Government—

**Gen. GREENE.** The power is transmitted two-thirds of the way across the State by a New York corporation. The corporation pays all the taxes which the present laws impose; it is subject at every point to the regulation of the public service commission; it has been before the public service commission in many matters and has always complied with its orders. Was there not a law, prior to the passage of the Burton Act, which made it illegal to bring power from Canada?

**Mr. CARMODY.** There was not any law, I believe. These people were enjoying that power on the Niagara River without asking any permission from the National Government at all.

**Mr. FOSTER.** Is not this about the situation, with reference to this question of the importation of electricity? You treat that as part of the foreign commerce over which Congress has control?

**Mr. CARMODY.** Yes.

**Mr. FOSTER.** That is, Congress has the sole power to regulate it?

**Mr. CARMODY.** Yes.

**Mr. FOSTER.** Now, when that electricity once reaches the hands of the importer; that is, once reaches the consignee on your side of the

line, then does not the authority of Congress absolutely cease, without any law?

Mr. CARMODY. It certainly does.

Mr. FOSTER. So that if a New York company imports it from Canada, we have the right to regulate the importation of it, but just as soon as it reaches your New York company, then, without any law on the subject, our authority ceases. It is analogous, is it not—

Mr. CARMODY. The only difference comes when you go further and undertake to say to the State of New York, as you have said to this power company, who shall have that privilege, then we say you are going beyond the powers of Congress, and you are invading the rights of the State.

Mr. FOSTER. My point is that it ceases to be foreign commerce as soon as it reaches the hands of the consignee on your side.

Mr. CARMODY. We should be permitted to regulate its transmission.

Mr. FOSTER. We can not take it away from you.

Mr. CARMODY. You may have no right to take it from us, but I am arguing against your undertaking to do something here which you have not any power to do.

Mr. GARNER. I understood the Attorney General to contend the only reason why Congress should pass any law touching the question of the importation was because of the danger that a Canadian company would bring across the power and deliver it in this country, and it being interstate commerce the State of New York would not have any control over it.

Mr. CARMODY. Yes.

Mr. FOSTER. My point is that as soon as it reaches the consignee in the State of New York we lose control over it, unless it goes outside the State of New York. It is analogous to this liquor question that we have with us always like the poor.

Mr. GARNER. To illustrate then, take a concrete proposition. Suppose a power company in Detroit, Mich., should undertake to carry power into New York, or a power company in Canada should come across the line and take it into New York, it would be interstate traffic which the State of New York could not reach, and therefore it is necessary for Congress to turn over this power to regulate the prices and the conditions of interstate traffic in this power to the State of New York.

The CHAIRMAN. General, have you concluded?

Mr. CARMODY. That is all I care to say, unless there are some other questions.

Mr. BROWN. Simply to enforce attention to that which I assume to be a well-known fact, do you not understand that all the distributing companies on the American side, including the companies that take from the Ontario company, all the distributing companies, the companies that deal with the consumers on the American side—that those are American companies?

Mr. CARMODY. You are speaking about the water-power companies?

Mr. BROWN. Those are New York companies?

Mr. CARMODY. Yes; those on this side are.

Mr. BROWN. Those on this side which receive power from Canada—they deal with the consumers—they are New York companies

upon this side who take power from the other side. Therefore, would it not be true that as to distribution, rates, and everything else between the distributing company and the consumer, the State of New York would have the power to regulate the rates?

Mr. CARMODY. The State should have the power.

Mr. BROWN. Does it not have it without any act of Congress?

Mr. CARMODY. It would have it, but an act of Congress would seriously interfere with that power.

Mr. BROWN. Is it not your idea if Congress should attempt to interfere with this importation, in giving to certain particular specified companies the right to import, it would be worse for the State of New York as though Congress said nothing, because it might work out as an interference with New York's rights?

Mr. CARMODY. Congress has the right to regulate it under the power to regulate interstate commerce.

The CHAIRMAN. Mr. Moore, one of the conservation commissioners of the State of New York, is here. We shall be glad to hear from Mr. Moore.

Mr. MOORE. The attorney general has spoken for the conservation commission.

The CHAIRMAN. Very well, then we will hear from Hon. Clark H. Hammond, corporation counsel of Buffalo.

**STATEMENT OF MR. CLARK H. HAMMOND, CORPORATION COUNSEL, BUFFALO, N. Y.**

The CHAIRMAN. You may proceed, Mr. Hammond.

Mr. HAMMOND. Mr. Chairman, I was sent down here to represent the city of Buffalo by a unanimous resolution passed by our board of aldermen yesterday. That is the only excuse I have for being here.

My position in coming down here is one of wanting to learn and find out. I do not know that there is anything I can say that will be of any particular benefit or use to your committee. Congressman Smith and I had a talk last Sunday in Buffalo and he asked me what some of my experiences had been with regard to the public service commission in matters where I represented the city, and I was very glad to give him any information I had, and he thought perhaps it would be of some benefit to this committee, as I understood him, to give these facts to the committee.

I have not made an examination, I would like to say, of the law; I have not had the opportunity since the matter was brought to my attention. But I do know this; I have understood from Congressman Smith that there was some claim made to your committee that it was not necessary to have any Federal control of this matter, because of the fact that the public service commission had ample authority and control.

Now, it is the furthest thing from my thoughts to say anything detrimental to the public service commission of the State of New York. They are a very excellent commission, and very excellent in the different matters I have had before them. But in 1910 we appeared, at the direction of the city, with a committee appointed from the chamber of commerce, before the railroad committee in the Legislature of the State of New York for the purpose of having the public-service commission law amended in order to give that commission

further and greater power, and we are in a position now that we have not a bill under which the public service commission of the State of New York acts that is adequate to reach all cases, so that we wish it was greater in its scope and conveyed greater powers upon the commission than it does convey.

I will give some illustrations. An application was made for the consolidation of the natural gas companies. Those companies—some of them include at present companies outside of the State of New York, and it developed on the hearing before the public-service commission that to-day 77 per cent of the natural gas that comes into New York State and is distributed throughout Buffalo and different cities comes from the State of Pennsylvania. What is the situation? Just as has been mentioned by some of the members of your committee, the public service commission's power stops at the State line. In other words, it was brought out, and the commission agreed with me on that proposition, in the argument of the matter, that if the consolidation went through, and if the New York State companies were consolidated and they took gas from a Pennsylvania corporation, all control was lost to the public service commission of the State of New York over these Pennsylvania corporations, except where they supply gas in the State of New York they could regulate the business in the State of New York.

Another illustration: We have an investigation on at the present time in the city of Buffalo with regard to rates for electricity. I have made this discovery—and if I am not correct, I will be glad to be corrected—that is, that under a public service commission law of the State of New York a complaint can only be made by the mayor of the city or by 100 citizens to the commission against the company that is distributing, with whom the consumers of the city do business. Now, the generating company at the Falls transmits that power to the city line, and the distributing company takes it at the city line at a cost of about \$25 a horsepower and distributes it. When I am getting this investigation ready, I find that I am up against a stone wall, and that is that we can not investigate that.

The CHAIRMAN. Do you think the public service commission of the second district of the State of New York has not sufficient authority?

Mr. HAMMOND. Absolutely. That also refers to the first district. I say there is no provision that I can find in the law of New York which gives either one of those commissions, upon complaint made, a right to investigate. That brings me to this proposition. There is a clause in the law that does permit the public service commission, on its own complaint, to investigate. So that, although the mayor of the city or 100 citizens can not make a complaint against this company generating power, the public service commission can. What do I find that situation to be? In the gas investigation which I went through, and in the natural gas consolidation upon which I appeared, we found that the public service commission of the second district states this to be their position, that the public service commission can not, although it may have the power under the public service commission law to investigate on its own motion, that it can not do it, for these reasons: First, because they have more work than they can possibly take care of with the complaints made. Second, they have not funds to do it with, although the Legislature

of the State of New York has been very generous and has given them a great many thousands of dollars, yet it is a practical impossibility for them to hire experts and engage men to make such investigations, and it can not be done. That is the statement of the chairman of the commission.

Mr. DIFENDERFER. Did he not write to a body of men—I think 135—who petitioned him that it would be impossible to do anything during the year 1912?

Mr. HAMMOND. He did; yes, sir. That is why I said I would be glad if the board of aldermen would direct me to come down here and tell you that we think it is generally understood—

The CHAIRMAN. Can not the Legislature of the State of New York remedy the matter?

Mr. HAMMOND. They can remedy some, perhaps, but they can not remedy the situation I ran up against in the natural-gas case.

The CHAIRMAN. Why?

Mr. HAMMOND. Because New York State has not the power to go beyond its State line. That brings me back to the proposition as to why we say, if it is possible to do it, the people of the city of Buffalo say to this committee, if we can possibly get any rights and have any power, let us have it.

Mr. GARNER. If Congress should provide for the importation of this power from Canada and should also provide that when the power is imported it would turn it over to the laws of the State of New York to be controlled, would that answer the purpose?

Mr. HAMMOND. No, sir.

Mr. GARNER. If you had a law authorizing you to control the companies from Pennsylvania, for instance, investigate the companies from Pennsylvania when they come into the State of New York, would that not be sufficient?

Mr. HAMMOND. Has the State of New York that power?

Mr. GARNER. If it could be given to you. This is a power that can be given to you.

The CHAIRMAN. Do you mean to contend, as a legal proposition, that when that power comes into the State of New York, the State of New York, through some of its agencies, has not the right to regulate it?

Mr. HAMMOND. I said expressly in my statement, that so far as the power and the gas coming into the State of New York are concerned, the public service commission has the right to control whatever is brought in, but their power stops at the State line, so far as the Pennsylvania corporation is concerned.

Gen. GREENE. I would like to ask what power the National Government can give to the public service commission of the State of New York that the Legislature of the State of New York can not give.

Mr. HAMMOND. I do not say it can give any. I do say that the National Government has powers that the State of New York has not got.

Gen. GREENE. Over the transmission of gas and electricity?

Mr. HAMMOND. Yes, sir; absolutely.

Mr. CLINE. Define those powers, if you please.

Mr. LEVY. What is your position here, in favor—

Mr. HAMMOND. My position is to give this committee, at the request of Congressman Smith, what light I have as to what the people

of Buffalo want, and we want all the power that can be had, all the water that can be diverted under this treaty to-day.

Mr. LEVY. Then you are weakening your proposition when you say the State of New York has no authority. I thought your argument was entirely for the benefit of New York. It seems to me you weaken your proposition when you say the public service commission has no power.

Mr. HAMMOND. I can not help whether I weaken my position or not. I have given you the facts.

The CHAIRMAN. What the people of the city of Buffalo want is cheap gas and cheap power.

Mr. HAMMOND. And to have the companies that supply it get a reasonable and fair return on their investment, and to be properly regulated.

The CHAIRMAN. Is not the public service commission organized for that very purpose? Your contention is that the public service commission is not doing its duty?

Mr. HAMMOND. No, sir; I do not say that at all. I say the public service commission is very efficient. I think it is doing its duty as far as it can, but it has human limitations.

Mr. FLOOD. And constitutional ones, also.

Mr. HAMMOND. Yes, sir.

Mr. FLOOD. You say the commission is limited by the character of these companies?

Mr. HAMMOND. I am against that proposition. Suppose some of this power is taken from the Canadian company. What power has the public service commission of the State of New York got to go into the books of the Canadian company?

Mr. FLOOD. So that you think the regulation and control ought to be vested in the National Government?

Mr. HAMMOND. Absolutely.

Mr. GARNER. What power has the National Government to go into Canada any more than the State of New York?

Mr. HAMMOND. My answer to that proposition is that, as I said in the beginning, I have not studied these questions as the Attorney General has, but I do want to call the attention of the committee to the fact that we need it, and we want it if we can get it.

Mr. LEGARE. Want what?

Mr. HAMMOND. We want the Federal Government control over these companies, so that we can investigate, and have an investigation, and not be stopped at some place because the public service commission can not go on and do certain things.

Mr. LEGARE. You mean the companies that transmit the power to the United States?

Mr. HAMMOND. Yes. One of the members spoke about Michigan. Suppose the city of Detroit transmitted their power down to Buffalo. I can not use any better illustration than that. What power has the public service commission of the State of New York got to inquire about that company? It could not begin to find out anything about that. If we had Federal control, that would step in and take the place where we can not cover it by the public service commission of New York.

Mr. GARNER. But Congress might pass some kind of law giving a commission, a national commission, the right to regulate interstate

commerce in gas and electricity, but I can not see where we can reach the Province of Ontario. That is all we have got to deal with in this instance. We are now talking about the importation of power from Canada, and we would not have jurisdiction of a proposition to create a commission to regulate prices—to regulate prices of interstate commerce.

Mr. HAMMOND. My answer to that is, that they have in Canada, they have the hydroelectric commission. You have probably heard of it. It was my pleasure last week to go through a part of the power plant and substation of that commission. If we can not get satisfactory rates from these power companies, if it is deemed feasible to go into the proposition that the Canadian Government has with that commission, and we want to take in Cleveland and Detroit, and have that arrangement, how are we going to do it without some Federal legislation?

I am here to give you what our experiences have been and to tell you what our wants are. If you can figure it out, well and good; if it can not be done, we have to be satisfied. We do want, in Buffalo, the right and control that can be exercised under the interstate commerce clause, or any clause, so that when we endeavor to find out what is a reasonable price for electric power, we will not be stopped by the State line.

Mr. FLOOD. How many companies furnish power in Buffalo?

Mr. HAMMOND. Two companies, Buffalo General Electric Co., that furnishes lighting, and the Cataract Co. We claim that they are absolutely one and the same company, and I certainly am going to try to prove that before I get through with this investigation.

Mr. FLOOD. In other words, they have two companies, where one ought to be doing the work.

The CHAIRMAN. You believe there is a community of interests?

Mr. HAMMOND. Yes.

The CHAIRMAN. No competition between them?

Mr. HAMMOND. No competition between them.

The CHAIRMAN. Both New York companies?

Mr. HAMMOND. Both New York companies?

The CHAIRMAN. Can not the public service commission remedy the matter?

Mr. HAMMOND. No, sir. The answer goes right back again to this proposition. They get their power from a generating company at the Falls, and the public service commission—we have no power under the public service commissioners' law to file a complaint against that company.

Mr. TOWNSEND. Your complaint is against the company that supplies power to the consumer?

Mr. HAMMOND. Yes, sir.

Mr. TOWNSEND. What is to interfere with your approaching an investigation of that matter, ascertaining all the facts, whether the rates are excessive or not, whether the service is adequate, and then imposing such regulations upon those companies as would be sufficient? You have no interest in the generating company?

Mr. HAMMOND. Have we not?

Mr. TOWNSEND. I think not.

Mr. HAMMOND. Here is the way it appeals to me, from investigations I have made in these other matters. The distributing com-



panies will come in and say we have a contract with the generating and transmitting company, or the transmitting company to pay them \$25 a horsepower. To illustrate, I will put it that way. Suppose they say they have a contract to get power from a generating and transmitting company at \$25, at the city line. There is nobody else they would get their power from, because they are tied up with a contract. The public service commission, as I read the law, can only say what those companies are entitled to charge in order to make a reasonable return on the investment, allowing them their contract price that they get it for from the company who generates it.

Mr. TOWNSEND. I do not think the contract would be controlling at all.

Mr. HAMMOND. I do not think so.

Mr. TOWNSEND. I do not think it would be even persuasive in the presence of testimony in regard to the price charged for power on the Canadian side by the transmitting company.

Mr. HAMMOND. But that price, \$9.40, is not transmitted to the city line?

Mr. TOWNSEND. It is the same character of power that is transmitted.

Mr. HAMMOND. How are you going to supply that intervening lapse? You can not take the price at the Falls and say it is only worth that price at Buffalo. We can not go into the cost of transmission. That is the answer. Under the public service commission law we have no right to file a complaint against that company, and the public service commission is the only one to do it, and they say they can not do it.

Mr. TOWNSEND. Mr. Hammond, you said a moment ago in answer to a question that there is an absolute monopoly?

Mr. HAMMOND. That is what we claim.

Mr. TOWNSEND. Are there not laws that can give you power outside the laws of the public service commission?

Mr. HAMMOND. Yes; I might start in, but I would never see the finish of it.

Mr. CLINE. It is not a defect in your methods of procedure, if that is true?

Mr. HAMMOND. Suppose I can not prove there is a monopoly? That does not remedy the situation.

Mr. TOWNSEND. I did not have the advantage of hearing the first part of your presentation. I did hear you say, however, that there was a foreign company that transmits power to the city line and then turns it over to a distributing company. Am I right?

Mr. HAMMOND. Yes, sir. Let me correct that. It is not a foreign company. They generate—it is a New York State corporation, a corporation of the State of New York.

Mr. DIFENDERFER. They generate it and transmit it to the city line? What is the name of that company?

Mr. HAMMOND. The Niagara Falls Power Co.

Mr. TOWNSEND. The public service commissioners can investigate, then, absolutely the distributing company in Buffalo?

Mr. HAMMOND. Yes, sir.

Mr. TOWNSEND. They can also, so far as the transmitting apparatus is within the territory of the State of New York, investigate that?

Mr. HAMMOND. That is where I differ with you.

Mr. TOWNSEND. It is within the State of New York.

Mr. HAMMOND. I understand, but how are you going to get that corporation before the public service commission?

Mr. TOWNSEND. That is a corporation that takes at the boundary line and transmits it to the city line?

Mr. HAMMOND. A corporation from the Falls to the city line.

Mr. FOSTER. Congress can not help you in that.

Mr. HAMMOND. I am not sure about that.

Mr. GARNER. Let us suppose a case. Suppose that the public service commission in New York had plenty of time and plenty of clerical assistance, and employed experts under them, could they not go into the question of the cost of the power company's transmission from Niagara Falls to the city of Buffalo and determine whether or not it was reasonable, and upon its own complaint?

Mr. HAMMOND. They could.

Mr. GARNER. Then how do you expect Congress to assist you in doing a thing that you say can not be done on account of inefficient machinery in your own State?

Mr. HAMMOND. The answer to that is that I have thought that proposition out; and you ought, it seems to me, regulate the matter of the transmission of power between States, just as in the case you mentioned—in the case of Detroit.

Mr. GARNER. That is an entirely different question.

Mr. HAMMOND. Why is it different?

Mr. GARNER. Just a moment. We have under consideration here a question of the importation of power from a foreign Government.

Mr. HAMMOND. Yes.

Mr. GARNER. The question of regulating rates and controlling power between the States is entirely another question.

Mr. HAMMOND. I understood that you had that in this bill.

Mr. GARNER. I do not know of any provision here creating a commission to control the power in interstate commerce, either electricity or gas power.

Mr. HAMMOND. I understood there was something of that kind in this bill. If I am wrong on that, all right. I understood the Attorney General to say that it can be done. I say it should be done by a bill.

Mr. LEGARE. Mr. Hammond, are not these domestic corporations doing business in the State of New York?

Mr. HAMMOND. What do you mean by "these"?

Mr. LEGARE. These generating companies.

Mr. HAMMOND. The distributing companies are. The generating companies—

Mr. LEGARE. Then you admit that the people of New York have a right to regulate these domestic companies?

Mr. HAMMOND. I assume they have.

Mr. LEGARE. You will also admit that the State of New York and the municipal government has the right to fix these rates?

Mr. HAMMOND. To regulate these rates; yes, sir.

Mr. LEGARE. Would you be willing to turn over this authority to the Federal Government, the authority and power which the State and your municipal form of government have of fixing these rates,

and would you be willing to turn it over to the Federal Government entirely?

Mr. HAMMOND. I am not here to speak on that subject.

Mr. LEGARE. Yes, you are.

Mr. HAMMOND. Just let me answer.

Mr. LEGARE. I understand that is what you are asking for.

Mr. HAMMOND. I am not here to speak upon that question, because the Attorney General, as I understand, represents the State of New York. What I do say is that where we find the public-service commission's law of the State of New York ineffective, we do want Federal control.

Mr. LEGARE. You are willing to turn this control over to the Federal Government entirely?

Mr. HAMMOND. I do not say that.

Mr. LEGARE. That is the only way you can do it.

Mr. HAMMOND. I do not agree with you on that.

Mr. LEGARE. Is there any complaint against these rates?

Mr. HAMMOND. There is.

Mr. LEGARE. By whom?

Mr. HAMMOND. The city of Buffalo.

Mr. LEGARE. In what way?

Mr. HAMMOND. By complaints filed with the public service commission of the State of New York.

Mr. LEGARE. There have been complaints filed?

Mr. HAMMOND. There have been complaints filed, and the answers are filed.

Mr. LEGARE. I understood that no complaint had been filed.

Mr. HAMMOND. I filed the complaint; it had my name on it.

Mr. LEGARE. When was that done?

Mr. HAMMOND. The day before the last election. I was not up for election. I was elected two years ago and my time is not out, so that the filing of the complaint the day before election had nothing to do with the situation at all. I had already served two years; I have still two years more to serve. It was not filed before because the mayor of the city of Buffalo had the complaint and kept it a year and four months. I had drawn it, and he brought it out to me the day before election, and he said he wanted it filed. He was elected two years ago.

Mr. LEVY. I can not make out yet what you are here for.

Mr. FLOOD. He wants some Federal control over the importation of power from Canada.

Mr. LEVY. I understood Buffalo sent you here.

Mr. HAMMOND. That is right.

Mr. LEVY. Do you indorse the Attorney General's remarks?

Mr. HAMMOND. Mr. Levy, you will have to pardon my weakness, but I said a while ago that I finally wanted to get to that proposition. I will be very glad to take it up now.

Mr. LEVY. Do you indorse the Attorney General's argument here to-day?

Mr. HAMMOND. I am not here for the purpose of indorsing—

Mr. DIFENDERFER. I do not think this gentleman is here to be badgered.

The CHAIRMAN. Proceed with your argument.

Mr. HAMMOND. As I have stated, by reason of the situation developed in Buffalo; if it can be done we feel that there should be

some Federal control to regulate the transmission of power between the States, and also, if possible, to overcome any defects existing in the New York State public service commission law.

Mr. SHARP. In a word, your contention is that whereas the people of Buffalo are thoroughly convinced that there is no honest competition there, you are at sea as to the best way to compel reasonable rates, either under the State or national law?

Mr. HAMMOND. That is it exactly. And I filed my complaint with the hope of accomplishing that result. The public service commission say they can not investigate this transmitting and generating company. They are given that power, but they say they can not. They say they have not the funds and that they have more work than they can do to take care of cases where complaints have been filed.

Mr. SHARP. One further question. I would like to know, for information, what reasons you have for believing that the rates are excessive and that there is no competition.

Mr. HAMMOND. As compared with statistics we have received from other cities and States the information contained in reports filed with the public service commission by the electric companies.

Mr. SHARP. Do they get the power from water power or from steam?

Mr. HAMMOND. They get their power from water power, although it may be one of the disputed questions—

Mr. SHARP. I mean in other places?

Mr. HAMMOND. I understand they get it from the Falls and they transmit it to the city line.

Mr. SHARP. Do those other places get it from water power, which is supposed to be much cheaper?

Mr. HAMMOND. Yes, sir; like the hydroelectric commission; it gets it for \$9.40 at the Falls and transmits it at a great deal less than what we pay.

Mr. DIFENDERFER. In fact, the price is \$12, is it not?

Mr. HAMMOND. My information is that it is \$17.45 in Toronto, and \$18.55 in Hamilton, as against \$30 in Buffalo.

Mr. SHARP. I refer to other places in this country, on this side.

Mr. HAMMOND. That is right; we have also made investigations there.

Mr. SHARP. Is that generated by water power or steam?

Mr. HAMMOND. I understand where it is generated by steam it is supplied at less cost.

Mr. SHARP. Does part of this cost come largely from the number of distributors, there being three different agencies?

Mr. HAMMOND. That is one.

Mr. SHARP. Is there any way of controlling that?

Mr. HAMMOND. No way as to the generating and transmitting companies.

Mr. SHARP. Have you any evidence that there is an identity of the personnel of the two companies, either in the board of directors or the stockholders?

Mr. HAMMOND. Yes, sir; we have that.

Mr. SHARP. Do you believe that is true?

Mr. HAMMOND. I believe they are all controlled by the same interests, and in fact, their representatives say that the officers are the same. We are talking about the distributing companies.

Mr. SHARP. Are they connected with the other companies who furnish power to them for distribution, reaching to the original company that takes power direct from the Falls?

Mr. HAMMOND. That is my information. Each of the distributing companies in Buffalo is either controlled by the transmitting company, or they have a large amount of stock in the company, so that they have control.

Mr. DIFENDERFER. Is it not a fact that the president of one company is the vice president of another?

Mr. HAMMOND. That is true.

Mr. SHARP. Just one more question. The other day some reference was made by one of the speakers who I thought was very well qualified to speak. He said that one of these companies had as one of their assets certain political standing in the State, and he mentioned some of the former statesmen who were in touch either with the commission or the companies. Do you think there is anything in that—that there is a political asset as well as a property asset?

Mr. HAMMOND. That I could not say. My investigations have not led me to that.

Mr. SHARP. You do not know anything about that?

Mr. HAMMOND. I do not know anything about that.

Mr. DIFENDERFER. I would like to know what the price of power in Buffalo is as compared with other cities in New York that receive this same character of power.

Mr. HAMMOND. These matters of power prices are very intricate and complicated affairs, I find. In a general way I have found that Buffalo is paying more than Lockport or other places that are near Buffalo.

Mr. DIFENDERFER. Can you state what it is in Lockport?

Mr. HAMMOND. I can not. I have understood that it is lower. Gentlemen who are here can give you those prices absolutely. I do not like to say what they are when I am simply giving you my impressions in a general way.

What the city of Buffalo wants is also more power granted to the State, so that we can have the benefit of having the entire amount of water that is available and feasible to be diverted under this treaty. We would like to have absolutely stated in this bill the amount of water diverted and used, and I care not, and the people of Buffalo care not, whether our learned Attorney General is correct and that it should be done by the bill giving the State the power to regulate and control and take care of that matter or whether it be done by the Federal Government, if Congress has that power. That is a matter I have not gone into. But we do say, whichever way your committee here determine is proper, we do want to have that water power available, so that if the people in the State of New York and the different municipalities within and outside the State want to have some grant made by the State of New York, if it is necessary, in order to put into operation a proposition somewhat similar to the hydroelectric commission of Canada, that that can be done. That comes to the proposition as to why I am here. That is one proposition we want.

Mr. LEVY. That is what I want.

Mr. DIFENDERFER. You would not favor giving this power to these two companies that are generating?

Mr. HAMMOND. I assume they should be put under a proper control. I would not take it away from these companies if they are justly and fairly entitled to it, and it can be reasonably exercised by power of control over them to see if it was properly used; but I do say that any power taken should be controlled by some authority—I do not care whether it is the State of New York or the Federal Government—I believe it should be used most efficiently. In other words, we are coming to the point now where this water power is so valuable that there should be some control to see that the power that is taken is used efficiently and the best results produced. In other words, not to let some company take the power and not have an efficient apparatus by which it can get the most with that power and not waste the power. We of Buffalo believe it should be properly handled and properly regulated by the proper authority to see that efficient power is generated and that efficient plants are erected and taken care of to use that power.

Mr. FLOOD. Is there any complaint that these companies have any inefficient plants?

Mr. HAMMOND. I have heard that some plants are more efficient than others.

Mr. DIFENDERFER. Now, the Hydraulic Power Co. is a company which is not distributing except in the neighborhood of Niagara?

Mr. HAMMOND. I can not tell you the details of that. Gentlemen here can give you those facts better than I, and I do not like to give you my impressions.

Mr. DIFENDERFER. What company transmits it to the city line?

Mr. HAMMOND. The Niagara Falls Power Co.

Mr. DIFENDERFER. Then it is taken from that company by a distributing company that has an agreement with another company for the service?

Mr. HAMMOND. Absolutely.

Mr. DIFENDERFER. So that there must be three profits paid from the time the water is taken to the time when it reaches the consumer?

Mr. HAMMOND. Absolutely.

Mr. DIFENDERFER. I should like to know something about that.

Mr. HAMMOND. That is something I can not talk about, but there are gentlemen here who can give you more facts. One company, the Cataract Power & Conduit Co., distributes only power, and they then furnish power to the Buffalo General Electric Co., which furnishes light, so that with that company there are only two profits, whereas with the Buffalo General Electric Co. there are three, which you mention.

Mr. FLOOD. With reference to this question of efficiency, what is the greatest quantity of power produced by any of these companies per cubic foot?

Mr. HAMMOND. I can not tell you. I have not the knowledge nor the inclination. That is all I have to say. Those three propositions are the things I came here for, and I have presented them as best I could, without any preparation. I came down to give you these facts and to say to you that, as far as the people of the city of Buffalo are concerned, they would like to have those things done, as well as that with regard to further regulations, if possible.

Mr. LEVY. Do you know what the cost of street lamps is in Buffalo compared with the city of New York?

Mr. HAMMOND. I do not.

Mr. LEVY. I would like to get some idea of just what benefits these companies are to Buffalo. How much do these companies, that may be considered as domestic companies, how much do they pay in taxes annually to Buffalo?

Mr. HAMMOND. I can not tell you that. We have in New York State a franchise tax by the State, as the attorney general can explain, and in addition to that we have the general taxation and the board of assessors of the municipality. I can send them to the committee if you desire it. I can give you the total amount of taxes that they pay. I will be very glad to do that.

Mr. LEVY. How much difference is there between the price charged for this electric power in Buffalo, per horsepower, and the price charged per horsepower generated by steam?

Mr. HAMMOND. We have not in Buffalo any company that generates power by steam and sells it to the public that I know of. In other words, we have simply these two companies, the Cataract Power & Conduit Co. and the Buffalo General Electric Co.

Mr. DIFENDERFER. They do substantially all of the business?

Mr. HAMMOND. Absolutely; it is a monopoly.

Mr. DIFENDERFER. There is no competition whatever?

Mr. HAMMOND. We do have some private plants for the purpose of lighting public buildings like the city hall. But there are only a few of those in Buffalo, and outside of that the only way the city of Buffalo can get electric power at the present time is from those companies.

Mr. DIFENDERFER. What does it cost per horsepower?

Mr. HAMMOND. \$30 per horsepower for purposes of power.

Mr. DIFENDERFER. What is the relative difference between the two, between the power and the lighting?

Mr. HAMMOND. The lighting runs from 4 to 9 cents a kilowatt hour. Nine is the house lighting.

Mr. DIFENDERFER. I do not see how you can institute any comparison between those two.

Mr. HAMMOND. We can make a comparison in the horsepower.

Mr. COHN. Mr. Hammond, you have stated here several times that this is a monopoly in the city of Buffalo.

Mr. HAMMOND. That is my claim.

Mr. COHN. Do you object to that, or do the people of Buffalo object to it as a monopoly?

Mr. HAMMOND. My position with regard to that, and here I can not speak for the city as a whole, I can speak from my experience. For instance, in the gas investigation—that is, I believe if we had the proper power placed somewhere to regulate and control and see that proper service is given, that a monopoly is best for the city. But without that proper control to regulate, to control these companies, then it is bad.

Mr. COHN. Is it not a fact that the company which I represent applied to the city of Buffalo to distribute power in the city, and its application was refused?

Mr. HAMMOND. That is so. That was some years ago.

Mr. COHN. Is it not a fact also that the Ontario Power Co. have tried to come into the city of Buffalo to distribute power, but that the franchise which was offered was of such a character—

Mr. HAMMOND. I do not know.

Mr. DIFENDERFER. Why do you not ask him under what conditions?

Mr. COHN. There were no conditions—

Mr. DIFENDERFER. Why was the rate refused?

Mr. HAMMOND. They did not want competition.

Mr. DIFENDERFER. Who controlled the refusal?

Mr. HAMMOND. The public authorities of the city of Buffalo.

Mr. LEGARE. Have you the right under your charter to manufacture your own electricity?

Mr. HAMMOND. I think we would have to have an amendment to the charter, to have an amendment by the legislature.

Mr. LEGARE. Are you sure about that?

Mr. HAMMOND. That is my impression; that we would have to do that to have that right.

Mr. DIFENDERFER. In granting this original right, did you give this power company absolute right to use the streets without competition?

Mr. HAMMOND. Oh, no; not without competition at all; absolutely not.

Mr. BROWNE. Coming back to the question suggested by Congressman Levy, I understand that when you speak of what the city of Buffalo wants, you speak only of quantity?

Mr. HAMMOND. Of what?

Mr. BROWNE. Of quantity. What the city of Buffalo wants is that the full amount of 20,000 feet allowed by the treaty shall be allowed to be diverted, so that it can get the benefit of the 4,400 feet? The city of Buffalo wants more power?

Mr. HAMMOND. Yes, sir.

Mr. BROWNE. Is it not true that they also want more power by importation—that they want more power, by importation—that they want more power, wherever it comes from?

Mr. HAMMOND. And we need it.

Mr. BROWNE. And there is a demand for it?

Mr. HAMMOND. Absolutely. And it should be properly regulated and controlled. That is why I come back to the Federal proposition.

The CHAIRMAN. Is that all you desire to say?

Mr. FLOOD. You said in your opening remark you were going to say something about a division of territory between these companies.

Mr. HAMMOND. I simply said to you that from the facts I have been able to ascertain, what I expect to prove in the investigation is that there is that arrangement.

Mr. FLOOD. You did not expect to prove it here?

Mr. HAMMOND. I am satisfied there is a division of territory between these companies.

Mr. FLOOD. Could you state what territory the respective companies have?

Mr. HAMMOND. I can not state that at the present time, and I would not want to state it, if I might be permitted not to.

The CHAIRMAN. Is there any other person here who desires to be heard, from the State of New York?



We will now hear from Mr. Edward Haggeman Hall, representing the American Scenic and Historical Association.

**STATEMENT OF MR. EDWARD HAGGEMAN HALL, OF THE  
AMERICAN SCENIC AND HISTORICAL ASSOCIATION. OF NEW  
YORK, N. Y.**

Mr. HALL. Mr. Chairman, I represent the American Scenic and Historical Association.

I came down here by vote of the trustees of our society at their regular monthly meeting last evening, upon only two hours' notice.

Our interest is in the preservation of the scenery of Niagara Falls. Two of our trustees best qualified to speak on that subject were prevented from coming, one by illness, and another by an engagement in the courts.

It seems to me proper that one should speak with specific facts with regard to these matters. I do not feel qualified upon this short notice, so to speak, and I do not think it is just, either to our society or to you or to myself, to attempt to present such an argument on such short notice, without preparation.

I feel, however, that the principal legal question which has come up here is one which is worthy of your consideration, and I might say we called it to the attention of the senior Senator from New York something over a year ago, and called his attention to the fact that the question which the Attorney General has brought up here to-day is liable to come up. I want to say for our society that, in case Congress should turn that power over to the State, we have as much confidence that our State authorities will be amenable to the sentiment in regard to the preservation of the Falls as you gentlemen here.

Mr. GARNER. Who was the senior Senator from New York, whose attention you called to it?

Mr. HALL. Senator Root.

Mr. GARNER. You do not know whether he was interested in any of these companies, do you?

Mr. HALL. I do not.

Mr. DIFENDERFER. Would your association be satisfied to turn this matter over to the conservation commission of the State?

Mr. HALL. I think so, sir. They have not passed upon that question because I do not think they knew about it.

Mr. DIFENDERFER. You would be willing to have them take jurisdiction in this matter?

Mr. HALL. If they could.

The CHAIRMAN. The committee will now hear from Mr. J. Horace McFarland, president of the American Civic Association.

**STATEMENT OF MR. J. HORACE MCFARLAND, PRESIDENT, AMERICAN CIVIC ASSOCIATION.**

Mr. MCFARLAND. Mr. Chairman, the legislation before you relates to the enforcement of Article V of the treaty between the United States and Great Britain, proclaimed May 13, 1910, the section cited being that which limits the diversion of the water of the Niagara River above the Falls of Niagara for power purposes.

In order that the true intent of the article of the treaty mentioned may be discovered, it is proper to consider the circumstances preceding its discussion, signature, and ratification.

On October 6, 1905, the American Civic Association then in session in Cleveland, telegraphed to the President of the United States and to the Governor General of Canada a statement strongly urging international action for the preservation of Niagara Falls, and thus raising for the the first time, upon the basis of the ordinance of 1787 erecting the Northwestern Territory, the question of international ownership of the great cataract. This resolution was by the President of the United States referred to Attorney General William H. Moody, who replied in the following words:

As to the ground for Federal intervention, so far as proposed, I think there can be no fair doubt. The character of Niagara Falls as one of the greatest natural wonders, its situation in a boundary river on the frontier of a foreign country, its undoubted historical relation as a natural possession and common heritage—all these elements in the case would fully justify you in proposing through the ordinary diplomatic channels the consideration of this subject by the two Governments immediately concerned.

The same point of view in reference to the paramount jurisdiction of the United States and the Government of Great Britain was held by former Attorney General P. C. Knox, now Secretary of States, and also stated by formery Attorney General John W. Griggs, in the following words:

Whatever jurisdiction the State of New York has over the waters of the river and their use is subject and subordinate to the power of the National Government in two respects: First, with respect to navigation, as to which the laws of Congress are supreme. Second, as to the subject of boundary between this Nation and Canada, in respect to which the United States and Great Britain have the right by treaty stipulation to impose such conditions and regulations upon the use of the river and its waters as they deem mutually proper. A treaty duly negotiated between these two powers and ratified by the Senate of the United States would be the supreme law of the land, and if in such treaty it were provided that no such use of the waters as is contemplated should be hereafter made, and this regulation were enforced by act of Congress, the treaty and the legislation would be valid, the rights of the State of New York and all private riparian owners to the contrary notwithstanding. \* \* \* It is in my judgment necessary, in order that full and complete control of this subject may be obtained by the two powers, that an international agreement in the form of a treaty should be made. Such a treaty would involve no infraction of or trespass upon the rights of the State of New York, because its rights as above stated are subordinate to the superior jurisdiction of the Nation with respect to the stream as a navigable river and as an international boundary.

Deeming it proper so to do, President did institute diplomatic correspondence with the Government of Great Britain looking toward the negotiation of a treaty for the purpose of preserving Niagara Falls. Meantime he thought it wise to call the attention of Congress, upon its assembling in December, 1905, to the necessity for intervening legislation on the part of the United States, and in several interviews with officers of the American Civic Association the President made plain his earnest desire that legislation be enacted looking toward a cessation of the proceeding spoliation of the Falls.

The point is here made that all this effort in respect to an international treaty to be negotiated arose from an insistent desire on the part of the President and the people of the United States to preserve the Falls of Niagara in their scenic majesty.

The further point is made that, whereas, in consequence of a resolution of the Legislature of the State of New York, passed March 17, 1904, the then Secretary of State, Hon. John Hay, had begun negotiations with the British ambassador for the preservation of Niagara Falls, active work in that direction was not instituted until after, by the action first mentioned, in October, 1905, the American Civic Association drew the attention of the President, Congress, and the country generally to the dangers then and since existing and to the international ownership of the Falls.

Although the State of New York did, by its action in 1904, thus call the attention of the Federal Government to the necessity for the preservation of Niagara, that State had exercised no efficient control over the Falls looking toward their preservation under its then presumed exclusive State control. Thus that legislature had granted to the Niagara Falls Hydraulic Power & Manufacturing Co. and to the Niagara Falls Power Co. the right to use a total of 26,700 cubic feet per second and had likewise granted six named corporations, between 1886 and 1894, additional charters permitting the taking of water from Niagara River for the production of power, some of them practically without limit.

There had been by the State of New York no attempt whatever to restrict the use of the water of the Niagara River for the production of power, as may be judged by the total amount involved in the right actually granted and alive to-day, so far as that State is concerned.

While also the State of New York had, through its creation in 1885 of the State reservation at Niagara, admirably restored the surroundings to the Falls, against the opposition of the beneficiaries of their local desecration and the city of Niagara Falls, it had not and has not since undertaken any protection whatever of the gorge below the State reservation, or of such extension of the State reservation as would make it compare in extent with the Queen Victoria Niagara Falls Park erected by the Province of Ontario on the Canadian side of the Falls.

That is, the State of New York has not, when it had unchecked control of the Falls, in any way attempted to restrain their diversion for the purpose of power production, or to take care of the scenery incident to this great natural spectacle, except in respect of the admirable reservation above mentioned.

The point is therefore made and enforced that there is no warrant for the contention that has been made before this committee that the State of New York has any right whatever in connection with the distribution or assignment of water permitted to be diverted under the treaty of Canada.

Your committee has heard numerous, from various corporations, and some individuals, upon the effect of diversions that have already proceeded, and upon others it is desired to authorize, directly or indirectly. Attention is called strongly to the fact that every one of these arguments relates to the taking of more water from the Falls of Niagara. Not one of those corporations here and now represented is seeking to give up any claim it may have to the use of the water of the Niagara River. Any yielding, of whatever nature, to any of the claims here made means, then, a further depletion of the cataract.

All statements made should be considered in this light only, except as made by those few who are here to represent the great American

people, the rights of whom in the ownership of this natural wonder I am confident your committee will safeguard.

Now, it is apparent that, first, the State of New York has shown almost no concern as to the integrity of the Falls of Niagara, and, second, that the institution of the diplomatic negotiations, which resulted in the treaty proclaimed May 13, 1910, was, so far as the purpose of this present discussion is concerned, entirely with a view to the preservation and not the extended use of the Falls of Niagara. According to a letter written me by Hon. Elihu Root, when he was Secretary of State, under date of October 20, 1906, "the negotiations between the United States and Great Britain for the preservation of Niagara Falls were begun between Mr. Hay and the British Ambassador." In a further letter, written to me by the same gentleman, October 24, 1906, Mr. Root says:

There is serious danger that we can make no treaty for the preservation of Niagara Falls.

There was no other thought than this in the minds of those who have furthered the institution of diplomatic negotiations, and the act, approved June 29, 1906, in section 4, specifically requests the President of the United States "to open negotiations with the Government of Great Britain for the purpose of effectually providing by suitable treaty with said Government for such regulations and control of the water of Niagara River and its tributaries as will preserve the scenic grandeur of Niagara Falls and of the rapids of said river."

No further argument is needed, I infer, to prove that the only purpose of the United States in seeking the treaty proclaimed May 13, 1910, in so far as Article V is concerned, was to preserve Niagara Falls. That there is no such statement in Article V of the treaty does not change the intent of the people of the whole country whose insistence brought about the action which resulted in the negotiation of the treaty.

When the details of the treaty were first made known, and previous to its ratification, the American Civic Association was impelled to make objection, first, to the absence of any specific mention of the real object of that part of the treaty outlined in Article V; second, to the large authorized diversion; and, third, to the absence of any mention or supervision of the importation of electric power from Canada. These objections were made known to Secretary of State Root, and it is betraying no confidence to say that he urged me with all vigor and force not to interpose objections to the confirmation of the treaty by the Senate, which objection at that time could have been made conclusively effective, alleging that he had done his utmost with the Government of Great Britain, and specifically stating that the inclusions of Article V were permissive and not obligatory. Secretary Root understood them fully that there would be strong opposition in the United States to the extension by more than 25 per cent of the amount of diversion which had already been found to injure the Falls, and more opposition to the unrestricted importation of power from Canada.

It was upon Secretary Root's presentation of the permissive features of Article V that I agreed not to interpose any obstacle on behalf of the American Civic Association to the ratification of the treaty by the Senate. The language of the treaty is plain when it says:

The United States may authorize and permit the diversion within the State of New York of the waters of said river \* \* \* for power purposes, not exceeding in the aggregate a daily diversion at the rate of 20,000 cubic feet of water per second.

The same permissive phrasing is attached to the Canadian section. It would be stultifying to say that the deliberate conclusion in Article V of the words "may authorize" and "not exceeding" was equivalent in its inclusion to the words in the preceding paragraph, which said "no diversion of the waters of the Niagara River above the Falls from the natural course and stream thereof shall be permitted."

It is proper, though incidental, to hear remarks that the third paragraph of Article V authorizes the United States to permit the diversion of a certain amount of water, and not the State of New York, whereas the fourth paragraph authorizes a certain diversion "by the Dominion of Canada or the Province of Ontario."

The treaty thus plainly settles the question of jurisdiction as between the Province of Ontario on the one side and the Federal Government only on the other side.

As bearing upon the view had of this matter by the British ambassador himself, Hon. James Bryce, I may say that at an extended interview had with him in the spring of 1906 he most emphatically joined in the desire of the American Civic Association for the full preservation of the Falls of Niagara. At his request I sent him to Ottawa full details as to permits, diversions, power works, and the like, not previously in his possession. It was characteristic of Mr. Bryce's public spirit to have him say to me:

If I were not British ambassador and could make speeches about this matter for two weeks in Canada, I know the Falls could be preserved.

The points are here made that, first, Article V of the treaty under discussion was, so far as the United States of America is concerned, formed solely and only for the preservation of Niagara Falls, and not for the extension of the use of Niagara Falls in the production or importation of additional power; second, that the preservative idea was fully in the minds of all those concerned on the part of the United States, and at least of the British ambassador himself on the part of Great Britain, at the time of the negotiation, the signature, and the ratification of the treaty. There would have been no such article in the treaty had not the American Civic Association and other organizations of like aims voiced the will of the people for the preservation of Niagara Falls.

I need not present to your committee details with which you are already completely familiar in the extended and admirable discussion as to the preservation of Niagara Falls contained in Senate Document 105, as transmitted in a message from the President of the United States, under date of August 21, 1911. The facts there presented, after three years of engineering work of a novel, delicate, and intricate character, speak for themselves. Gen. Marshall says:

The existing diversions have already seriously interfered with and injured the scenic grandeur of Niagara Falls, at the Horseshoe, which injury and interference will be emphasized by the effects of lower stages fewer to recur on Lake Erie and the upper lakes, due to natural causes.

Referring to the established reduction in the depths of Lake Erie, due to the present authorized diversion for power for production

at Niagara Falls, and contemptuously disregarding various pleas made to you by those who are interested in taking more water from Niagara, the statement is made by the Chief of Engineers that "the aggregate loss per season for the entire fleet using Lake Erie ports as terminals becomes a very large amount," which is an additional reason for restraining any further diversion. There can be no doubt as to the will of the people of the United States, which Congress is bound to respect, and which has been emphatically manifested as desiring the efficient preservation of Niagara Falls further unharmed. In fact, I believe that if a referendum was now made to the voters of the United States there would be an overwhelming majority for the complete restoration of Niagara Falls to their pristine majesty, regardless of the private interests thus dispossessed.

The people are cognizant of the fact that in the Falls of Niagara—a world spectacle of increasing value—they have not only a vast and beneficent financial resource in its attraction of a million visitors a year, with an admitted travel expenditure of \$25,000,000 annually, which at 5 per cent would give Niagara Falls a capitalized value of \$500,000,000, but they have also the knowledge that if the Falls are preserved and developed into electricity for distribution entirely to private advantage, there may continue a wide combination of utilization and conservation which, should the last final needs of the Nation require, might in the then-improved methods of producing and distributing electricity, inure to the enormous advantage of many millions of people.

I desire to emphasize strongly the fact that, as based upon the findings of the Chief of Engineers, already referred to, any diversion of water for power purposes from the upper pool, whether that diversion be made in the United States or in the Province of Ontario, equally interferes with the scenic integrity of Niagara Falls. Thus the diversions of the Ontario Power Co., the Niagara Falls Hydraulic Power & Manufacturing Co., the Niagara Falls Power Co., all draw equally and indiscriminately from this upper pool, and equally and indiscriminately destroy the scenic integrity of the cataract.

It is true the United States can not control such diversion as is made within the Province of Ontario, in so far as the resulting power is used within the Province. It is equally true that the use of electric power in the United States, whether it is developed on the Canadian side or on the American side, equally and efficiently interferes with the integrity of the Falls. It would be unworthy of a great nation, and an evasion which the people of the United States would properly resent, if the view should be taken that, while there was maintained sharp restrictions on the diversion of water in the United States for the production of power in order to preserve the scenic integrity of the Falls, there need be no restriction of the importation of that power produced across the international border from water drawn from and equally depleting exactly the same pool.

This point of view is the more efficiently presented in the admirable document already mentioned, in connection with its insistence upon the damage that has already occurred in the Horseshoe Falls, which I need not point out to your committee, is as much an American fall as it is a Canadian fall.

In the document above referred to, a novel and most important view of the situation is presented on page 56 in respect to the way in which diversion not only tends to bring about an "unwatered crest line or bare spots in the rapids," but actually decreases the height of the fall by abstracting water from the crest line and restoring it in the gorge below.

It is also notably in point to call your attention to the statement on page 20 of the report above mentioned that the mean or average flow of the Niagara River is 210,000 cubic feet per second. This is 12,400 cubic feet per second less than the average flow as reported in paragraph 3 of the report of the American members of the International Waterways Commission to the Secretary of War under date of March 6, 1906. Inasmuch as all previous computations of the diversions authorized at Niagara Falls have been based upon the older estimate it will be seen that the later and more accurate findings of the Government engineers, showing an average flow of  $5\frac{1}{2}$  per cent less in volume, makes the problem of the diversion more serious and menacing. To take such action, under these circumstances, as would either directly or indirectly commit the United States to the diversion of the full permissive amount mentioned in the treaty would be to propose the depletion of the Falls of Niagara by exceeding 26 per cent. Not even the most astute of the engineers who are here asking, by direction and indirection, for more water for private benefit would, I insist, venture to go on record as believing that this total diversion would be unimportant or less than destructive.

It is here in point to say again that you have heard, and are hearing, and will hear from many who have plans at and about Niagara Falls, all looking toward the getting of a little more water. Not one of these plans in itself would work irreparable injury, but it is the aggregate of them that, although they have not exceeded much beyond 50 per cent of the contemplated treaty diversion, have already, according to Gen. Marshall, "seriously interfered with and injured the scenic grandeur of Niagara Falls."

Presentation has been made in detail by the engineer of the Lake Survey as to the utilization of the water granted under the provisions of the so-called Burton bill, approved June 29, 1906, and its extension.

I desire to emphasize these presentations, calling your attention to the fact that one of the companies most insistent on access to an additional amount of water on the American side—the Niagara Falls Power Co.—is now, according to Gen. Marshall's report, realizing "only about two-thirds of the available head." The fact that this company was a pioneer does not, I respectfully insist, in any sense make it proper that additional water be furnished from the glory of Niagara to make up for its lack of modern efficiency in using the water already given to it. I am not aware, as a master printer, for instance, I can claim any consideration from my customers or from the States when I am obliged to dispose of a great loss of my machinery, which was up to date when installed, but which has been superseded by more advanced and efficient items.

The same criticism applies quite properly to the admission from Canada within the limitations of the Burton bill, of the power produced by the Canadian-Niagara Power Co. at a utilization of but 136 feet one of a fall of 172 feet, and I respectfully urge that in line with Gen. Marshall's report, this company "should be called upon to

increase economy of conversion to the utmost limit permitted by the present condition of knowledge."

The water of Niagara is precious water; it belongs to all the world. It is of vast value to all the world as it plunges over the great precipice. And any diversions from and depletions of its glory should be attended by the utmost possible economy and value, and I respectfully urge this as one reason for declining to permit any additional diversions from Niagara on the American side, or admission of power from Canada, beyond the restrictions included in the Burton law above mentioned.

The recommendations in the report of the Chief of Engineers, previously referred to, contain certain novel propositions, looking, in one instance, as given on page 15, to the building of a "submerged dam placed in the bed of the river immediately above the Horseshoe Falls," and in the other instance, as mentioned on page 75, to "the construction of regulating works in the Niagara River to avoid the wasteful outflow of the water of Lake Erie."

If, upon further and detailed engineering study, these recommendations should prove practicable, and if the submerged dam in the first instance could be completed and in effect observed before any further diversion was authorized, it might be worth while then, and in the event of no further damage appearing, for the Federal Government to consider an extension to the limits of the treaty permission.

The American Civic Association has from the outset had no disposition to interfere with the sincere investments of those who were developing power at the time the wishes of the people of the United States became apparent, but it believes that no lease extension beyond the works then in actual or potential going form should be permitted, unless such extensions should be conclusively shown to prevent no further possibility of damage to the attractive and profitable spectacle of Niagara Falls as the greatest cataract of the western world.

In conclusion I wish to urge upon your committee, as in line with the most liberal thought of the American people, with whom we have had contact in letters, newspaper articles, and public meetings, aggregating the sentiment of millions, the qualification of existing proposed legislation before you, or the formulation of new bills, to bring about effectually and during the life of the treaty under discussion the recommendations found on page 15 of the document entitled "Preservation of Niagara Falls," already quoted from, namely, that the "minimum limit" of diversion authorized on the American side—namely, 15,100 cubic feet per second—be recommended; and that no greater amount of energy is permitted to be imported into the United States from Canada than 160,000 horsepower.

Maintaining the status quo as thus outlined will be acting on behalf of the American people. Extending the use of the water, either by granting permits for the diversion of a single additional foot, or by the admission of an additional horsepower from Canada will be for the interests of and in accordance with the demands of only the relatively few persons involved in the corporations selfishly developing power from the waters of the Niagara River.

The CHAIRMAN. If you have anything further to submit, Mr. McFarland, as a part of your remarks, it will be incorporated in the record.



The Chair wants to say that the committee will take a recess in regard to the hearings concerning the Niagara Falls power bill until next Friday morning at 10 o'clock. We desire to close the hearings in this subject next Friday, if possible.

Thereupon, at 12.25 o'clock p. m., the committee adjourned until Friday, January 26, 1912, at 10 o'clock a. m.

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COMMITTEE ON FOREIGN AFFAIRS,  
HOUSE OF REPRESENTATIVES,  
*January 26, 1912—10 o'clock a. m.*

The committee this day met, Hon. William Sulzer (chairman) presiding.

The CHAIRMAN. Dr. McLaughlin, representing the Public Health and Marine-Hospital Service, will be heard this morning.

**STATEMENT OF DR. ALLEN D. McLAUGHLIN.**

Dr. McLaughlin, will you give your name in full and your relations to the Government?

Mr. McLAUGHLIN. Dr. Allen D. McLaughlin, first assistant surgeon, United States Public Health and Marine-Hospital Service.

The official interest of the Public Health and Marine-Hospital Service on this problem is of course limited to the sanitary aspects solely, and it may be narrowed even further to the undue prevalence of typhoid fever in the cities on the Niagara frontier.

In Bulletin No. 77 of the Hygienic Laboratory is published the results of a preliminary sanitary survey of the territory, touching upon sewage pollution of the interstate and international water, with special reference to its bearing on the spread of typhoid fever. Of course you readily understand that in the undue prevalence of typhoid fever in the cities of great industrial and commercial importance—cities which by reason of the surrounding country draw a large number of visitors from every State in the Union—the question of water supply involves the cities as an interstate matter; it is a great interstate matter because the traveler is not protected as well as the resident. He is at the mercy of the hotels and has to take what they give him, while the resident is warned that the water is dangerous.

For this reason the Federal Government made this survey.

The following extracts from the bulletin will show practically the view which I held before and which I have no reason to change.

In regard to sewage disposal, Buffalo has done nothing beyond conveying its sewage to the Buffalo and the Niagara Rivers. It amounts to about 116,000,000 gallons daily. Proper sewage disposal requires two things—it must not create a nuisance and it must not be a menace to health.

It is conceded that a stream flow of  $3\frac{1}{2}$  to 7 cubic feet per second for each 1,000 population will care for sewage so that no nuisance is created. According to this calculation Buffalo would require for disposal of its sewage from the standpoint of nuisance, a stream flow of about 1,500 to 3,000 cubic feet per second. The Niagara River has a flow of about 220,000 cubic feet per second.

From the standpoint of menace to health, Buffalo's sewage disposal is another question. While the dilution is great, it is not as great as it appears at first glance, because of the fact that the polluted current hugs the shore

and the complete dilution with the entire mass of water does not take place. Owing to the velocity of the stream, sedimentation is scarcely possible, and this velocity is another dangerous factor in carrying contamination quickly from Buffalo to the water fronts of other cities lower down the river.

The sewage of Buffalo is unquestionably a great menace to the inhabitants of the Tonawandas, Niagara Falls, and Lockport, just as the sewage of the Tonawandas is a menace in lesser degree to the people of Niagara Falls, so long as these communities drink unfiltered or untreated water from the Niagara River. The position of the intake well out in the channel may protect from the shore pollution during good weather conditions, but its safety because of this is not assured. One thing is certain—the Niagara River can not be used as a sewer and at the same time be expected to furnish safe drinking water at all times without filtration or treatment of the water.

Even if the entire sewage of Buffalo was diverted from the Niagara River, there is a question whether this stream could furnish a raw unfiltered or untreated water safe to drink 365 days in the year. One tributary stream alone, the Buffalo River, empties into the Niagara in time of flood as much as 20,000 cubic feet per second, the drainage from a very large and populous area.

The question of practicability of stopping the pollution of the Niagara River and of making the water safe for drinking purposes in its raw state requires very serious and close study. Certainly there are obstacles in the way which are very great from an engineering and economic standpoint. In view of these facts, it is the plain duty of municipalities now drinking Niagara River water without adequate filtration to take steps toward making such water safe while awaiting the solution of the larger problem of sewage pollution of the stream.

These municipalities have all failed in their duty to provide drinking water for their citizens. The Tonawandas have a sense of false security by reason of the position of the intakes. The municipal officials of Niagara Falls could have had no such delusion. They were informed by their own health officers and must have known for years that they were drinking dilute sewage and that the typhoid rate was continuously higher than any other American city, yet it was not until 1908 that steps were taken to filter the water, and the plant is not yet in operation. Niagara Falls's dereliction of duty was more culpable for another reason; during summer and autumn months thousands of persons visited the city from every State in the Union and from foreign countries as well.

In a word, purification becomes necessary for two reasons, viz:

1. To obviate nuisance.
2. To protect the public health.

The first, that of nuisance, is eliminated at once by the enormous stream flow, and will be touched upon later.

The second, menace to health, is present in spite of the enormous volume of water available for dilution, because these municipalities persist in using unfiltered and not-treated water for public water supplies. The public health can be adequately protected at once against the present pollution of the Niagara River by the installation of proper plants for treating or severing the water supplies of the various municipalities using the Niagara River as a source of public water supply.

The absolute prevention of pollution of a large stream draining a large and populous watershed is an impossible idea. Prevention of pollution to the point where the stream is safe for drinking a part of the time and restricting the pollution in amounts are feasible, but prevention of pollution to the point where such a river as the Niagara is safe for drinking every day in the year without filtration or treatment is an impossibility.

The crying necessity of all these cities from a sanitary standpoint, and especially from the standpoint of typhoid-fever reduction, is filtered or treated water supplies properly supervised to insure safe drinking water 365 days in the year.

Sewage purification may be necessary and often is necessary in spite of the presence of filtered or treated public water supplies in order to furnish a good raw water for the filter plants. The sewage pollution of the Niagara River at present probably does not cause at any of the intakes—Buffalo, Tonawanda, North Tonawanda, Lockport, and Niagara Falls—a bad raw water. By a bad raw water I mean a water not amenable to treatment without putting an unreasonable strain, responsibility, or cost upon a properly constructed purification plan. Niagara Falls primarily had a very bad raw water taken from the Niagara Falls Power Canal, but the new intake, 1,500 feet from shore, should furnish a good raw water, though not a safe water without purification. Their intakes were 1,500 feet from the shore, and they really thought their intakes were safe. The Niagara Falls municipal water officials took their water from the Niagara Falls Power Canal, which was shore water, practically, and which was very polluted.

Disposal of sewage by dilution is the cheapest known means of sewage disposal, and we would be very foolish if we failed to avail ourselves of this means wherever possible without detriment to the public health. As a general proposition it is cheaper to purify water than sewage.

An absolute prevention of pollution is impossible. What we need is control of pollution within permissible limits. Disposal by dilution should be permitted up to these limits. The permissible limit of pollution should be determined by water examination; and official standards for raw water, which will fix the boundaries of permissible pollution, are a necessity.

When the sewage contribution to the Niagara reached the point where a good raw is not obtainable, or where the water as furnished puts an unreasonable strain or excessive cost on the water purification plants, then purification of the sewage becomes necessary to the point where a good raw water is assured.

It is largely an economic question, and the balance between these two great agencies—water purification and sewage purification—must be adjusted with a nicety. No general rule can be formulated, as each city is a distinct problem. It would be unjustifiable to insist upon an expensive ideal method where the same results—the proper safeguarding of the public health—may be affected at a lower cost by judiciously combining disposal of sewage by dilution, or a partial purification of sewage with water purification.

Only by turning back the streams that pollute the east end of Lake Erie and the Niagara River can conditions be remedied.

Mr. SHARP. Will you please repeat that last observation there?

Dr. McLAUGHLIN. "Only by turning back the streams that pollute the eastern end of Lake Erie and the Niagara River can conditions be remedied." This statement in Mr. Bowen's letter is attributed to Mr. Isham Randolph. I presume by conditions he means sanitary conditions, especially extensive prevalence of typhoid fever. If so, I must take issue, as it is clear to the writer that proper water purification in these cities will remedy the conditions without turning back the streams. Such turning back of the streams might improve the quality of the Niagara River, but not to the point where it would be a safe drinking water without purification every day in the year, especially following heavy rains and floods; and, as indicated above,

a good raw water amenable to treatment is secured at any of the intakes under discussion.

Outside of the question of safe water supplies, and to return to the question of sewage disposal to obviate nuisance, the projected canal as a sewage carrier, or as a recipient of a more or less purified sewage effluent, has distinct disadvantages compared with the Niagara River. The Niagara River, with a stream flow of 220,000 cubic feet per second, could take care of sewage in this area from an urban population of more than 50,000,000 without nuisance,—obviously for a very long time in the future.

The proposed 6,000 cubic feet per second of canal flow would be able to care for the sewage of these cities without nuisance for a much shorter time. Theoretically from  $3\frac{1}{2}$  to 7 cubic feet per second of stream flow will care for sewage of 1,000 persons without nuisance. This would mean that the theoretical limit of disposal in this way by the canal would be reached when the population reached 1,700,000. Experience shows that the limit of sewage disposal by dilution is reached more quickly for certain reasons.

Mr. SHARP. Where you differ with Mr. Bowen, you mean in that connection the sewage disposal proposition for each city so as to prevent it being thrown into the stream?

The CHAIRMAN. He means filtered.

Dr. McLAUGHLIN. Yes. No rule can be furnished which will cover every city. At present the raw water at the intakes 1,500 feet from shore is so good that many people contend that it doesn't even need filtration. But it is the plain duty to put in purification plants, because even after an ideal scheme of sewage disposal you couldn't make the water safe without purification.

Mr. SHARP. What I had in mind was this: Quite a number of towns and cities are located on the streams, and the question has been raised in a number of those places as to the proper distribution of sewage in those towns, so that it will not escape into the rivers that run down into the lake which contaminate the lake quite as much at the towns located right on the lake, because the streams run direct from those towns into the lake. I know on Lake Erie there are quite a number of those towns.

Dr. McLAUGHLIN. Yes, sir. I made the survey of all of those from Toledo to Buffalo on Lake Erie.

I might say here that we come in on that. Apparently, they consider it our duty as public health officers to consider bad odors and smells the same as disease, and that is true of all the town and village officers.

The CHAIRMAN. Doctor, what have you to say regarding the advisability of conferring jurisdiction on the International Waterways and Boundary Commission to prevent the pollution of the streams and lakes between Canada and the United States?

Dr. McLAUGHLIN. I really never thought of that, Mr. Chairman.

The CHAIRMAN. Why wouldn't that commission be a good body to have jurisdiction?

Dr. McLAUGHLIN. I think the control of the pollution of the streams, within permissible bounds, should be taken care of by the Public-Health Service of the United States.

The CHAIRMAN. Is the Public-Health Service of the United States doing anything to prevent the pollution of the waters between Canada and the United States?

Dr. McLAUGHLIN. I don't think the Public-Health Service has such power, sir.

The CHAIRMAN. Then between the International Waterways and Boundary Commission and the Public-Health Service of the United States, you think the jurisdiction should be in the Public-Health Service?

Dr. McLAUGHLIN. I believe that the officers of the Public-Health Service are qualified and competent and it would be in line of their work to make the necessary examination, which is the only way it can be controlled by a systematic control of the water.

The CHAIRMAN. The International Boundary Commission can do that.

Dr. McLAUGHLIN. Yes, sir; very nicely.

The CHAIRMAN. The International Boundary Commission would have jurisdiction on both sides—the Canadian side and also the United States side—and it could make rules and regulations by which the waters could not be polluted along these streams and lakes in the United States and Canada.

Mr. SHARP. May I ask you, Mr. Chairman, in that connection, inasmuch as you have given some thought, evidently, to this, what would be the outcome of launching that power in that commission with reference to having any conflict with the boards of health in the different cities bordering on these lakes?

The CHAIRMAN. I doubt if there would be much conflict, because you can give jurisdiction to the International Boundary Commission and that body would then formulate rules and regulations.

Mr. GARNER. They are limited in their power. Under what provision of the Constitution are you going to turn over the regulation of the health of the people, either by the commission or by Dr. McLaughlin's department or any other department? How are you going to say—under what provision of the Constitution are you going to turn over the regulation of the health of the people from the State of New York to the Federal Government?

The CHAIRMAN. I might answer, the general welfare clause. [Laughter.]

Dr. McLAUGHLIN. Mr. George M. Wisner, chief engineer of the sanitary district of Chicago, has found that, although theoretically Chicago should not reach the limit of disposal by dilution without nuisance before 1920, as a matter of fact the limit has already been reached, and a nuisance actually exists at the points on the drainage canal system. Certain urban wastes, such as stockyards refuse, etc., make the contribution for 1,000 persons from large cities richer in organic matter and putrescible materials than that from 1,000 persons in smaller communities. Mr. Wisner further shows that the oxygen of the fresh lake water, which is the agent which prevents nuisance, is robbed from the water by the deposits of septic fudge accumulating in long reaches of quiet flow, and consequently is not available for action on the fresh sewage. This being a power canal, with dams and long reaches, it will afford excellent chance for sedimentation and the formation of the fudge deposits which greatly rob the water of its oxygen. The growth, commercial and industrial,

which will probably accompany this power development, will further approximate the condition against which Chicago is struggling.

It is certain, if this proposed canal is used for the disposal of sewage by dilution, that nuisance will result before the urban population reaches one and three-quarters million. This will necessitate one of two things:

1. Increased stream flow through the canal for dilution purposes, or,
2. Purification of the sewage before discharge into the canal.

The first solution, increased stream flow of the canal, may be impracticable because of laws and treaties existing or to be made.

The second solution, purification of the sewage, will impose an excessive burden upon the city of Buffalo, which it will be difficult to justify, in view of the fact that the disposal by means of the Niagara River, whether by simple dilution or partial purification, will be found a much cheaper proposition.

Mr. GARNER. Let me ask you a question, Doctor, if you will permit. You have given us a very interesting statement concerning what I might term the neglect of the officials of the different cities and the State of New York to preserve the health of their people. The question we have got under consideration is the carrying out of a treaty between Great Britain and the United States to utilize certain waters in the Niagara River, and the particular question we have got under consideration is the question whether we have utilized 4,400 feet not now authorized by statute, and whether or not we will let in from Canada certain power—the question of power you have nothing to do with. Now, what conditions could Congress make in considering this question that would remedy the defects—the citizens themselves, or the neglect of the citizens themselves, to take care of their own health? What remedy could you suggest that Congress could provide to protect those people against themselves?

Dr. McLAUGHLIN. I think that in the interest of the general good, from an interstate standpoint, there should be official standards of water, raw water, in rivers used as sources of drinking supply. These standards should be a minimum to which the States could add such restrictions as they see fit under their laws. This should be the minimum requirement to give us protection in a State where there are no laws. Take the State of Michigan. I can speak of it because I am from Michigan. We have no laws controlling the water supply, and the city of Port Huron can pollute the waters of Lake Huron.

Mr. GARNER. Then, if I understand you, you would have the Congress of the United States pass a law undertaking to go into a State and to compel the States to use a certain kind of water for drinking purposes, making a standard of water to be drunk in the State?

Dr. McLAUGHLIN. Making a standard that they shouldn't drink any water worse than that.

Mr. GARNER. Under what provision would you get into the waters of the States that isn't interstate commerce?

Dr. McLAUGHLIN. I think that the undue prevalence of a dangerous disease in a great city of great industrial and commercial importance, for instance Pittsburgh, is something more than a local or State matter. I don't know what authority we have and we are under the impression that we haven't any authority. We have made a scientific investigation to show the necessity of that.

Mr. GARNER. I think you are to be congratulated upon your efforts to take care of the public health. The only thing I was trying to get at was has Congress the power to regulate these matters or isn't it a matter that the people ought to take action upon themselves. And they ought to be educated up to the standard that you would have them go.

Dr. McLAUGHLIN. The position of our service is that the health machinery ought to be in the hands of the State. But we ought to have a standard just as we have in quarantine law. We helped them in the State of New York during the cholera epidemic.

The CHAIRMAN. Doctor, will you be good enough to leave your statement with the reporter?

Mr. DIFENDERFER. This committee is after information bearing upon certain subjects that have been explained to you. Are you acquainted with the health officer, Robert Talbott, of Niagara Falls?

Dr. McLAUGHLIN. I met him; yes, sir; when I was there. He had just been appointed.

Mr. DIFENDERFER. Do you know whether or not he is an efficient officer? Do you regard him as such?

Dr. McLAUGHLIN. I don't know anything about him. His predecessor had been there a great many years.

Mr. DIFENDERFER. He has made a statement here which I have taken from one of the newspapers. It is entitled, "City's drinking water polluted by Buffalo and Tonawanda sewage." It is a short article and I would like to make this a part of the record, if you please, Mr. Chairman.

The CHAIRMAN. There is no objection to that.

**CITY'S DRINKING WATER POLLUTED BY BUFFALO AND TONAWANDA SEWAGE—HEALTH OFFICER TALBOTT TELLS WHY THERE WERE 358 CASES OF TYPHOID AT NIAGARA FALLS LAST YEAR.**

*NIAGARA FALLS, January 11.*

The most interesting chapter in the annual report of Health Officer Robert Talbott, submitted to Mayor Philip J. Keller yesterday afternoon, was that bearing upon the subject of typhoid fever in the city. The report showed that during the year there had been reported a total of 358 cases of typhoid fever—nearly one for every day in the year. On the subject of typhoid, Health Officer Talbott said:

"Typhoid fever seems to be the bugbear of all diseases in our city, and this year we have almost twice as many reported as we did last year. Is it any wonder that we have so much typhoid within our city? We are drinking water from Niagara River, which is the receptacle of all sewage water from Buffalo and Tonawanda, saying nothing of the polluted streams that empty into Lake Erie. We have voted on the water question, discussed it from all standpoints, spent plenty of money, and are still spending it, and yet our water is contaminated. We have experimented with the different processes and they have been found wanting, but for the sake of suffering humanity let us hope 1912 will put within our reach water that is pure and fit to drink. The past year we have had 358 cases reported, and I trust each physician has done his duty in reporting every case to show how many cases a city of 30,000 population has had during the year 1911.

"Of course, our city has been visited by thousands of tourists, and I know of many who claim they got the dreaded disease while visiting here. Time and time again I have caused to be published in the daily press warning not to drink or use for domestic purposes water taken from the city mains, as it seemed to mean sure typhoid and maybe death, but those notices were not always heeded. Is that a fact our city should be called on the State laboratories have been most active and, indeed, most thorough in the examination of our drinking water, and each month have rendered a report of their findings, and

to them, much as their warnings and labor, have been for the welfare of Niagara Falls' citizens, who are consumers of this water."

Mr. DIFENDERFER. Now in connection with drainage, I would like to ask a few questions that I have mapped out here: About how much has the Chicago Drainage Canal cost, if you can answer that question?

Dr. McLAUGHLIN. I can answer approximately, although I don't have any right to give any information on that point. I think it was about \$70,000,000.

Mr. DIFENDERFER. About how long has it been in operation?

Dr. McLAUGHLIN. It has been in operation since 1900.

Mr. DIFENDERFER. Now can you give the reduction in the percentage of typhoid and other such diseases in Chicago during that period?

Dr. McLAUGHLIN. You will accept approximate figures?

Mr. DIFENDERFER. Yes.

Dr. McLAUGHLIN. For 11 years previous to the installation of that drainage canal the rate of typhoid fever per 100,000 was 56, I think for the 10 years. I think for the last 7 years in Chicago the rates have been only about 17.

Mr. DIFENDERFER. Seventeen per thousand?

Dr. McLAUGHLIN. Per 100,000.

Mr. DIFENDERFER. Dr. Evans is health officer of Chicago?

Dr. McLAUGHLIN. No, sir; a surgeon of our service is now there.

Mr. DIFENDERFER. Was Dr. Evans at any time connected with it?

Dr. McLAUGHLIN. He was health officer up to a year ago.

Mr. DIFENDERFER. Do you know whether he attributes the increase to the purity of the drinking water?

Dr. McLAUGHLIN. The decrease, you mean.

Mr. DIFENDERFER. I meant to say decrease.

Dr. McLAUGHLIN. Yes, sir; I think very rightly so. There wasn't any question but what the diverting of the sewage from the lake front had a great effect in reducing typhoid fever.

Mr. DIFENDERFER. Then, if that is the case, would it not be well for the Niagara frontier to obtain such a result if they could?

Dr. McLAUGHLIN. Provided such results could be obtained without undue cost. The cases are not parallel. I don't see where you can compare a rapidly flowing river with the quiet water of a lake.

Mr. DIFENDERFER. Well, if we continue to take water from the Niagara River 1,500 feet out from the American side, it won't flow as rapidly, will it, as it has been flowing? You reduce the depth, do you not?

Dr. McLAUGHLIN. That would be a very small matter. Almost negligible.

Mr. GARNER. Would the possibility for a slight deflection of the river be less from a canal running from the Niagara River than from the Chicago Canal, because of the greater rapidity with which it would flow?

Dr. McLAUGHLIN. I don't think there would be any difference in the quiet stretches of water behind the canal. Both canals would furnish excellent places for sedimentation.

Mr. GARNER. The river?

Dr. McLAUGHLIN. I don't know. I don't think there would be any great difference.



The CHAIRMAN. We are much obliged to you, Doctor. Mr. Barton is present and will now be heard.

**STATEMENT OF PHILIP B. BARTON.**

Mr. BARTON. In connection with the questions that are asked me, may I have the privilege of volunteering certain information?

The CHAIRMAN. Yes.

Mr. BARTON. I am manager of the Niagara Falls Power Co.

Mr. Chairman and Gentlemen, we did not intend to make any other statement at this time than that presented by Mr. Brown. I am simply here to answer any questions that the committee may wish to ask.

Mr. SHARP. What position do you hold and whom do you represent?

Mr. BARTON. The Niagara Falls Power Co.; I am vice president and general manager of the Niagara Falls Power Co.

Mr. SHARP. Are you familiar with the equipment for using that power in a mechanical sense?

Mr. BARTON. I am.

Mr. SHARP. It has been said here by different witnesses at different times through this hearing that there was not the efficiency developed that there ought to be in the economical use of this power. If that is true, to what extent is it true—not only in your company, but if you know of the other concerns using power, applying to them also?

Mr. BARTON. The tunnel of the Niagara Falls Power Co. has a loss of about 55 feet—that is, a slope, a difference in level—between the upper end of the tunnel and the lower end, and about 55 feet, which, of course, results in loss in the amount of power that can be developed from the head available between the river above the rapids and the river below the Falls.

Mr. SHARP. Can that be remedied in any way by more efficient equipment?

Mr. BARTON. In connection with second tunnel that we had planned to put in if we should develop our second hundred thousand horsepower, we had under consideration the plan to put in a very much larger tunnel at a lower level, and in that way not only make our second development more efficient than the first but also help the loss of the head in the first tunnel by connecting the old wheel pit with the new tunnel. But we did not develop the second half of our power.

Mr. SHARP. Can you do that with profit with your present diversion of water?

Mr. BARTON. I don't think we could, because the cost of the tunnel and the alteration of the plant would be exceedingly expensive. It is a serious question whether it would be commercially feasible. Possibly it might. But it is a serious question.

Mr. SHARP. What would you say if you had the knowledge of the other companies who use this power, as to their efficiency compared with what it might be made?

Mr. BARTON. I don't know that I ought to speak for the other companies because I have only a general knowledge of their features. I think the hydraulic company is using water about as efficiently as

it is possible to be used with the head they have got. So are we. The companies on the Canadian side are using water about as efficiently as it is commercially possible to use it, considering their location. Of course the reason for this loss of a head with Niagara Falls Power Co., which has been spoken of, I think has been explained. When we built our plant in 1890 one of the very first considerations that our directors had in mind was that there should be no interference of any kind whatever with the scenic features of the Falls. For that reason we placed our plant a mile and a half above the Falls, where it could not be seen by spectators of the Falls, and that necessitated a long tunnel. In order to get water with sufficient rapidity the tunnel was given the necessary slope. At that time there was no question about the amount of water to be used. That was 22 years ago. The amount we could use in any case would be absolutely a negligible quantity so far as the scenic beauty is concerned. As was explained to you the other day by advice of the most eminent engineers that could be found in the world that slope was adopted, and the whole thing was done largely to preserve the scenery, on account of which we are now being criticized for the lack of efficiency.

Mr. DIFENDERFER. What time in the day do you use the most force to create your power or the most water?

Mr. BARTON. Our load is substantially uniform throughout the 24 hours. It is almost a straight line. From midnight until 7 o'clock in the morning there is a slight depression due to the falling off of the load at Buffalo. Between the hours of 4 and 6 o'clock in the afternoon in the fall and winter months there is a decided peak due to the overlapping of the heavy street car traffic and the lighting load when the lighting commences somewhat earlier due to the longer night.

Mr. DIFENDERFER. Then during the day you would consume more water than you would from 12 o'clock to 7 o'clock the next morning, would you not, during daylight?

Mr. BARTON. Yes, sir; slightly, but the difference in effect on the appearance of the Falls is absolutely imperceptible.

Mr. DIFENDERFER. That would be about the time when visitors would like to see the Niagara Falls at its best, wouldn't it?

Mr. BARTON. I presume that is the case; but they couldn't possibly see any difference.

Mr. DIFENDERFER. Then at the time the most water is falling over the Falls would be at the time when they were sleeping.

Mr. BARTON. Theoretically, yes; but our variations are small, and as a matter of fact cause no variations in the depth of water at the crest of the Falls.

Mr. DIFENDERFER. There is one other question I would like to ask in that connection and that is this: How do you measure the water that you take from the Falls, by the hour, or do you measure it by the day—24 hours, is that where you get your measurement from per hour?

Mr. BARTON. The amount is determined by means of half hourly readings of the electric horsepower output on the basis, fixed by the Government engineers, of the relation between output and quantity of water. This then makes accurate measurement every half hour.

Mr. DIFENDERFER. That was done by measurement?

Mr. BARTON. That determination was made by measurement, they determined the relation between the water taken by our plant and the output in electrical horsepower. We keep a continuous record of our output.

Mr. DIFENDERFER. By the hour?

Mr. BARTON. Every half hour, and those records are transmitted to the War Department, and they can see by that data whether at any time we have exceeded the limit.

Mr. DIFENDERFER. Under that agreement, what are you privileged to use?

Mr. BARTON. It wasn't an agreement, it was a requirement of the law. We are permitted to use 8,600 cubic feet per second.

Mr. DIFENDERFER. Have you used that at any time?

Mr. BARTON. Yes, sir.

Mr. DIFENDERFER. The full amount?

Mr. BARTON. We have been using that continuously.

Mr. DIFENDERFER. I believe it is in evidence that the cost of production on the Canadian side is about \$9 per horsepower. Do you care to state what the cost of producing this power—I believe you are a transmitting company?

Mr. BARTON. We are a generating and transmitting company.

Mr. DIFENDERFER. Distributing company, are you?

Mr. BARTON. We distribute to some extent. We distribute to our own customers at Niagara Falls, and on the Canadian side the Canadian Niagara Co. at Bridgeburg and Fort Erie distributes a small amount to consumers.

Mr. DIFENDERFER. I would like you to state to this committee what the cost per horsepower is for generating this electricity.

Mr. BARTON. Our cost last year, 1911—I am not pretending to give the exact accurate figures—was approximately \$14.50 per horsepower.

Mr. DIFENDERFER. Now, you sell that power, do you not, to distributing companies?

Mr. BARTON. We do; some of it.

Mr. DIFENDERFER. Have you any idea what they charge the citizens of Buffalo and Lockport?

Mr. BARTON. The price we charge them?

Mr. DIFENDERFER. Have you any idea what they charge the public? I understand there are three profits that come out of this.

Mr. BARTON. That is a mistake. We sell the Buffalo City line to the Cataract Power & Conduit Co., which takes from us and distributes in Buffalo about 65,000 horsepower.

Mr. DIFENDERFER. Now to whom do they sell?

Mr. BARTON. Of that 65,000 horsepower they sell about 55,000 direct to consumers, and about 10,000 is sold to the Buffalo General Electric Co., which is an electric lighting company, engaged in business long before the Conduit Co. was organized and before we began to deliver power.

Mr. DIFENDERFER. Then it passes through three hands?

Mr. BARTON. The power delivered to the lighting company, which is used only for lighting and running small motors, passes through three hands.

Mr. DIFENDERFER. Then there are, naturally, three profits?

Mr. BARTON. In that case there ought to be.

Mr. DIFENDERFER. I should judge so.

Mr. BARTON. But the investment in that lighting company would have been just the same if there had been only one company.

Mr. DIFENDERFER. Now, of course, when you make up your estimates of cost you include in that your capital invested?

Mr. BARTON. The costs that I gave you?

Mr. DIFENDERFER. Yes.

Mr. BARTON. That includes all expenses, fixed charges, operating charges, cost of transmission.

Mr. DIFENDERFER. What has been the cost of the construction of that plant up to this time?

Mr. BARTON. Taking the whole property of the Niagara Falls Power Co. and the Canadian Niagara Co. on both sides of the river, the actual investment to-day is about \$24,000,000.

Mr. GOODWIN. Do you include in your estimate of cost the interest on the investment?

Mr. BARTON. Yes, sir; if you refer to cost of production, interest on the bonds, etc.; but no interest is included in cost of investment.

Mr. DIFENDERFER. How do you account for its costing so much more than the cost of production on the Canadian side?

Mr. BARTON. What figures do you take as the cost of production on the Canadian side?

Mr. DIFENDERFER. Nine dollars per horsepower.

Mr. BARTON. That is the selling price on the Canadian side, not the cost of production.

Mr. DIFENDERFER. Twelve dollars I understood was the selling price on the Canadian side.

Mr. BARTON. Nine dollars and forty cents is the price at which I understand the Ontario Power Co. sells to the hydroelectric commission.

Mr. DIFENDERFER. Then the cost of producing is about that, as I understand it; they are furnishing it at the cost. Now, the question asked was, How do you account for this difference between the cost of production on the American side and the cost of production on the Canadian side?

Mr. BARTON. I don't admit that \$9.40 is the cost of production on the Canadian side.

Mr. DIFENDERFER. Would you say that they are giving it away for less than cost?

Mr. BARTON. I don't know; I have no information. But, leaving that question aside, it naturally costs us more to generate and deliver on the American side. We have a larger investment because we have a larger tunnel, as I have explained, and for other reasons.

Mr. GOODWIN. How modern is the Canadian company?

Mr. BARTON. The Canadian plants are not complete yet. There are three of them, and none of them actually completed. They were all started at approximately the same time, about 1901 or 1902, I think.

Mr. GARNER. Would you mind telling the committee if there is any water connected with your company outside of what you take from the Niagara River?

Mr. BARTON. You mean in the capitalization?

Mr. GARNER. The capitalization.

Mr. BARTON. I don't think there is, sir.

Mr. GARNER. How did you organize with a capital of twenty-four million to begin with.

Mr. BARTON. The capital stock is about \$5,760,000. The bond issue is a little over \$18,000,000. The original capitalization started was \$10,000,000 of bonds—first-mortgage bonds—and about \$4,000,000 in stock, before the American plant was completed, \$3,000,000 in bonds in addition were issued, making \$13,000,000 and \$4,000,000 in stock for the American plant.

Mr. DIFENDERFER. Now, if your directors should conclude to become distributors in the city of Buffalo, would you consider that you had capital enough to do so?

Mr. BARTON. In that case we should have to raise more capital.

Mr. DIFENDERFER. You could raise it, could you?

Mr. BARTON. I think so.

Mr. DIFENDERFER. Why is it your company does not distribute in Buffalo?

Mr. BARTON. Because there is a distributing company there, and there is no reason to go into competition with them.

Mr. DIFENDERFER. Don't you think so? Don't you think, as a producing company, you could go into competition with them and supply the people of Buffalo with power at less cost per horsepower?

Mr. BARTON. I do not think so. We should have to make the same investment they have made, and I don't see how we could sell power any cheaper.

Mr. DIFENDERFER. Do you know if there is any gentlemen's agreement existing now?

Mr. BARTON. There is more than a gentlemen's agreement. There is a contract. We have specifically agreed not to go in, in consideration of their agreeing to take and pay for a large amount of power at a specified price for a long term of years.

Mr. DIFENDERFER. Does the hydraulic company distribute in Buffalo?

Mr. BARTON. No; they do not.

Mr. DIFENDERFER. Do they sell power as you do?

Mr. BARTON. In Buffalo?

Mr. DIFENDERFER. Yes.

Mr. BARTON. They do not sell any power in Buffalo.

Mr. DIFENDERFER. It is confined principally to Niagara Falls, is it not?

Mr. BARTON. Yes, sir.

Mr. DIFENDERFER. Do you distribute any in Niagara Falls?

Mr. BARTON. We do.

Mr. DIFENDERFER. To big consumers?

Mr. BARTON. About 80,000 horsepower.

Mr. DIFENDERFER. Does the hydraulic company infringe upon your territory in the neighborhood of Lockport?

Mr. BARTON. We have no territory.

Mr. DIFENDERFER. You distribute in Lockport?

Mr. BARTON. We do not.

Mr. DIFENDERFER. To whom do you sell?

Mr. BARTON. We sell power to the International Railway at Tonawanda. It has a transmission line going through Lockport.

Mr. DIFENDERFER. They supply Lockport?

Mr. BARTON. They do not. They use power for their own railway purposes.

Mr. DIFENDERFER. Who distributes power to Lockport?

Mr. BARTON. I understand there is a local company there the name of which I have forgotten.

Mr. DIFENDERFER. Do you know who furnishes them with their power?

Mr. BARTON. They get some of their power from the Niagara & Lockport and Ontario Power Co.

Mr. DIFENDERFER. Do they get any from you?

Mr. BARTON. They do not.

Mr. SHARP. I may have misunderstood you, but in your reply to Mr. Goodwin in reference to the companies on the Canadian side, did you state that they had not completed their equipment over there yet?

Mr. BARTON. None of their plants are as yet completed.

Mr. SHARP. They are supplying power there, are they not?

Mr. BARTON. Yes, but they are not completed to their ultimate capacity.

Mr. SHARP. What will be their ultimate capacity with reference to the taking of the amount provided for under the treaty on the Canadian side?

Mr. BARTON. They would take the entire 36,000 cubic feet.

Mr. SHARP. Now, they are simply supplying it as they can find sale for it?

Mr. BARTON. That is all.

Mr. SHARP. They will build up to that demand as fast as it grows?

Mr. BARTON. Yes; I am speaking for the Canadian Niagara Co. when I say that, and I presume other companies are in the same position.

Mr. SHARP. How many thousand cubic feet per second are they actually using?

Mr. BARTON. I have forgotten the exact figures. They are all recorded in the reports. I think the Army engineers got those. I should say somewhere in the neighborhood of 18,000 cubic feet per second—about half of the amount I should say, speaking roundly.

Mr. SHARP. Are you in favor of the importation of this power to the United States?

Mr. BARTON. Yes, sir.

Mr. SHARP. Do you think any arrangement could be made whereby a fixed amount of power imported into this country could be given a definite lease of duration, so that with the increasing demand on the Canadian side it would again be diverted back to Canadian industry?

Mr. BARTON. I don't think that would be practicable, because Canada could at any time prohibit the exportation of the power, but I don't think there is much danger of their trying it.

Mr. SHARP. So that it would be simply a question of getting a benefit that might be temporary on this side?

Mr. BARTON. It might be temporary with this in mind, that if the power is once brought over here and is actually used in industries the Canadians would be much less apt to say you shall stop bringing that power in than they would to say you shall not send over any more power than you are now sending. I think it is a great advantage to get power over here before it is preempted by Canadian industries.

Mr. SHARP. What company would get that power?

Mr. BARTON. You mean on this side?

Mr. SHARP. On this side; that was imported.

Mr. BARTON. So far as the Canadian Niagara Co. is concerned, the Niagara Falls Power Co. would take what was imported at Niagara Falls and distribute it to its customers there.

Mr. SHARP. Have any of these companies, including your own, made any tentative arrangement with the Canadian company to take any imported power that would be allowed to come in on this side?

Mr. BARTON. You mean the American companies?

Mr. SHARP. Yes.

Mr. BARTON. Not that I know of.

Mr. SHARP. There is no understanding at all?

Mr. BARTON. No.

Mr. SHARP. How would that be regulated—have you given that fixing question any consideration as to how they would get that power for distribution?

Mr. BARTON. I think that would be a matter of contract between the producing company and the distributing company.

Mr. SHARP. With your equipment for distribution and that of the other American companies, it is quite likely that the existing companies would get that power imported?

Mr. BARTON. The existing distributing companies?

Mr. SHARP. Yes.

Mr. BARTON. That would be the natural development, I should say.

Mr. SHARP. Is it your opinion, after having given this subject much consideration, that there would be any such competition by the importation companies as would lower the rate to the ultimate consumer on this side of the water?

Mr. BARTON. I think the tendency to lower the rate perhaps would not result so much from competition as it would from the increased volume of the product. Speaking of Buffalo, it is the only way I see, practically speaking, that Buffalo has any hope of getting a lower price for power is by increasing the volume of the power that the Cataract Power & Conduit Co. is enabled to sell, and that must be done by bringing it in from Canada.

Mr. SHARP. How long would it take for the present demand for increased power on this side of the water to practically absorb all that would be imported?

Mr. BARTON. I think it would be much faster than it can be developed.

Mr. DIFENDERFER. The Ontario Power Co. is a Canadian corporation, as I understand it?

Mr. BARTON. That is my understanding.

Mr. DIFENDERFER. They supply—the Niagara & Lockport Co. is the transmitting company, is it not?

Mr. BARTON. That is my understanding.

Mr. DIFENDERFER. Is there any connection between these two companies that might be considered favorable one with the other?

Mr. BARTON. I have no information.

Mr. DIFENDERFER. Gen. Green is vice president of the Ontario Co., is he not?

Mr. BARTON. I believe he is.

Mr. DIFENDERFER. That power is created on the Canadian side, is it not?

Mr. BARTON. It is.

Mr. DIFENDERFER. Isn't he president of the Niagara, Lockport & Ontario Co.?

Mr. BARTON. He is right here. I think that is the case, isn't it, General?

Mr. DIFENDERFER. If he is, that would show some close relationship, would it not?

Mr. BARTON. It would indicate that to me.

Mr. DIFENDERFER. This Niagara-Lockport Co. is the distributing company for the Ontario Co., is it not?

Mr. BARTON. That is my understanding.

Mr. DIFENDERFER. They take the product at the center of the river, as I recall the testimony given here.

Mr. BARTON. I think that was the statement made.

Mr. DIFENDERFER. From whom do they take it?

Mr. BARTON. From whom does the distributing company take the power?

Mr. DIFENDERFER. Yes.

Mr. BARTON. From the Ontario Co.

Mr. DIFENDERFER. In the center of the river?

Mr. BARTON. I don't know anything about it. I have nothing to do with that company.

Mr. DIFENDERFER. I thought possibly you might know, being pretty closely connected.

Mr. BARTON. Only know as much as anybody about the place knows.

Mr. DIFENDERFER. Have you any information regarding the McKenzie Mann Co., on the Canadian side?

Mr. BARTON. The electrical development company?

Mr. DIFENDERFER. Yes.

Mr. BARTON. I have some general information about it.

Mr. DIFENDERFER. Do you know why they refused to send this power to the United States under the agreement?

Mr. BARTON. I think I explained that the other day, as far as my knowledge goes. They did distribute and sell some power to come into the United States for a period of three years. They had four generators installed and as their load in Toronto increased about a year ago they needed the power of all of those machines to supply their own load in Canada, so that at the termination of the three years' agreement they said that they didn't wish to renew it, and the importation was stopped.

They are now putting in three additional machines, as I understand it, and an arrangement has been made by the Cataract Power & Conduit Co. and Electrical Development Co., which is a practical renewal of that contract, so that as soon as one of these generators is started, they will be utilizing their permit again.

Mr. DIFENDERFER. You said a little while ago that there was more than a gentlemen's agreement existing between your company and the distributing company.

Mr. BARTON. We have relations with only one company in Buffalo.

Mr. DIFENDERFER. There was more than a gentlemen's agreement with that company that you had the contract with. That contract precludes your doing business as a distributing company in Buffalo?



Mr. BARTON. It does, in the way I have stated.

Mr. DIFENDERFER. Return again to the Ontario company.

Mr. BARTON. It is only fair that it should, because we could ruin that company by going in there and competing with them.

Mr. CLINE. Because you could produce it cheaper?

Mr. BARTON. Because we control the whole thing. We could sell power for less than the cost, for example.

Mr. CLINE. I wouldn't presume that you would do that.

Mr. GOODWIN. Wouldn't the public be benefited?

Mr. BARTON. By the competition you mean?

Mr. GOODWIN. By you.

Mr. GARNER. Refusing to sell them power.

Mr. BARTON. Only temporarily. We couldn't sell it cheaper than they do because we would have to have the same investment.

Mr. GOODWIN. Replying to a question by Mr. Sharp, did I understand you to say that the importation of Canadian power would have a tendency to regulate the price?

Mr. BARTON. I said I thought it would tend to produce a lower price by increasing the volume.

Mr. GOODWIN. In other words, the price would be governed somewhat by supply and demand.

Mr. BARTON. No, sir; not exactly that. What I meant is, it is a general law that if you can produce a thing in larger quantities it can be produced cheaper per unit than you can by producing it in small quantities.

Mr. GOODWIN. But following that, you also said that you thought the consumption at least would be as rapid as the importation?

Mr. BARTON. Yes, sir; that is true.

Mr. GOODWIN. That there would not be much cheapening?

Mr. BARTON. If the law of supply and demand were to hold sway there would be no cheapening.

Mr. GOODWIN. But having a monopoly, there would scarcely be any difference.

Mr. BARTON. These companies are all under the supervision of the public-service commission, which watches those things very closely, and if it were shown at any time that their profits were exorbitant, it would have to be reduced.

Mr. DIFENDERFER. I noticed the city of Buffalo has appropriated \$35,000 to put them in a position to ask for those things.

Mr. BARTON. I understand that is the case. Complaint has been made.

Mr. DIFENDERFER. If it requires that much to ask a question, how then can an individual have any hope in propounding any questions? It seems to me as though it were rather complicated to reach that commission.

Mr. BARTON. Any individual has got to prove his case.

Mr. HARRISON. I want to ask you if any directors of your company are interested in the distributing company that you have a contract with.

Mr. BARTON. The company as a whole owns a controlling interest in the stock of the distributing company. It is different from the generating business. It is more convenient to organize the thing in that way.

Mr. CURLEY. About how much property do you pay taxes on, either at Buffalo or Niagara?

Mr. BARTON. Well, we pay taxes on all of our property everywhere.

Mr. CURLEY. About how much?

Mr. BARTON. At Niagara Falls last year the tax bill was \$175,000; I can't give you the figures about the other companies.

The CHAIRMAN. That was the local real and personal property tax to the city?

Mr. BARTON. Niagara Falls.

The CHAIRMAN. A local tax to Niagara Falls?

Mr. BARTON. The city tax was about \$130,000 and the rest was State and Federal income tax and one or two others.

Mr. CURLEY. A total taxation of \$175,000?

Mr. BARTON. Yes.

Mr. CURLEY. What proportion of that was paid at Niagara Falls?

Mr. BARTON. All paid at Niagara Falls. \$130,000, about, was the city proportion.

Mr. CURLEY. What is the tax rate there?

Mr. BARTON. The city tax rate is about 20 mills.

The CHAIRMAN. You pay no franchise tax?

Mr. BARTON. Yes; we have a franchise tax, also.

The CHAIRMAN. Will you explain that, please?

Mr. BARTON. We occupy certain property in the public streets at Niagara Falls with conduits and cables, and we are assessed on the valuation of that property and pay a tax to the city.

The CHAIRMAN. The fact I desire to develop is that you pay no franchise tax for your permit to the Federal Government and no franchise tax to the State of New York?

Mr. BARTON. We furnish the State of New York all the power that is needed by the park commissioners for lighting, heating, and power in the State reservation of Niagara. We also furnish without charge all the water that is needed in the State park.

Mr. CURLEY. What is your figure for the total investment at Niagara Falls?

Mr. BARTON. \$24,000,000.

Mr. CURLEY. Yet you pay at Niagara Falls, according to your statement—

Mr. BARTON. Investment at Niagara Falls—I didn't understand; Niagara Falls in New York, our investment is \$16,500,000.

Mr. CURLEY. You only pay taxes on about \$6,500,000.

Mr. BARTON. That is, the real assessed value in the city of Niagara Falls is \$6,500,000.

Mr. CURLEY. What other benefit does the business of the United States derive from the fact that these various companies that you represent other than the \$175,000 that is received in taxation? Is there any other that you can think of?

Mr. BARTON. They get the benefit of the power at a very low rate, and power fosters and promotes industries.

Mr. CURLEY. Do you think a very low rate is a rate that is nearly three times as large as that which is charged in Canada for the same class of power?

Mr. BARTON. I think the rates we sell power at are low rates, and they are not three times the price of power as sold in Canada.

Mr. CURLEY. I understood that in Canada they sell power for \$12 per horsepower and in Buffalo it is \$36 according to the figures given here the other day.

Mr. BARTON. I think those figures are not comparable; in the one case you have power at a power house right as it comes from the generators at a high voltage, and in the other case you have the power delivered at the premises of the consumer after undergoing a process of transformation and distribution and through underground conduits. There is the transformation sometimes three times. To compare those prices is about the same as comparing the ton price of pig iron with the price of nails per ton. One is the raw and the other is the finished product.

Mr. CURLEY. Is there more power sold on the Canadian side than on the American side of the Falls?

Mr. BARTON. No; there is less sold on the Canadian side at present.

Mr. CURLEY. Didn't you state a few minutes ago that the greater the volume of power the companies could produce the lower the price at which they could distribute it?

Mr. BARTON. I was referring then to the distribution cost mainly. The distributing company of Buffalo has a large investment in a distributing plant which is capable of distributing more power than it is now distributing and I suppose that as that volume increases the distribution cost per unit will be reduced. The same thing applies to generating. If you have an investment in a plant of 100,000 horsepower and only are turning out 50,000, you have got to pay fixed charges on the entire development on an income from the 50,000 horsepower.

Mr. GARNER. Let me see if I get your statement correct. You represent the Niagara Falls Power Co.?

Mr. BARTON. Yes, sir.

Mr. GARNER. That generates the power?

Mr. BARTON. Yes, sir.

Mr. GARNER. Then you represent, rather the stockholders in that company represent, the transmission company that takes it to Buffalo?

Mr. BARTON. No; there is no separate company. The generating company transmits to Buffalo.

Mr. GARNER. Then the Niagara company owns the controlling interest in the distributing company in Buffalo.

Mr. BARTON. That is true.

Mr. GARNER. Then the company that generates the power owns the controlling interest in all of the companies up to the consumer?

Mr. BARTON. No; the lighting business is taken care of by a separate company.

Mr. GARNER. Now, the public-service commission of the State of New York has power to regulate your prices?

Mr. BARTON. It has.

Mr. DIFENDERFER. Has it ever exercised that power that you know of?

Mr. BARTON. In our case?

Mr. DIFENDERFER. Yes, sir; in any case.

Mr. BARTON. It has exercised it in some cases, but not as to our companies.

Mr. GOODWIN. Lowered the rate?

Mr. BARTON. Yes, sir.

Mr. GOODWIN. To what extent?

Mr. BARTON. I say lowered the rate; I am not speaking through my personal knowledge. I understand the commission has investigated a number of cases and that in some cases it has reduced the rate. I can't give any case in which it has lowered the rate.

Mr. GOODWIN. Let us get back to the question of taxes paid last year. Did you say the total taxes paid by your company aggregated \$175,000?

Mr. BARTON. That is the generating company at the city of Niagara Falls.

Mr. GOODWIN. That is the company that you are vice president and general manager of?

Mr. BARTON. Yes, sir.

Mr. GOODWIN. Did that \$175,000 include the amount of taxes that the Niagara Falls Power Co., of which you are the general manager, has in the distributing company?

Mr. BARTON. No; they pay taxes besides that on their own property.

Mr. GOODWIN. The \$175,000 was exclusive?

Mr. BARTON. Exclusive of the other company and also exclusive of our property outside of the city of Niagara Falls. We pay taxes in every bailiwick through which the transmission line passes.

Mr. DIFENDERFER. What is the assessed valuation of your property at Niagara Falls?

Mr. BARTON. Over \$6,000,000.

Mr. DIFENDERFER. The reasonable value you claim is \$16,000,000?

Mr. BARTON. That is our investment in the city of Niagara Falls.

Mr. DIFENDERFER. That is rather a low assessment, is it not?

Mr. BARTON. As compared with other assessments at Niagara Falls it is higher than some others.

Mr. CLINE. Do you mean to say that the New York commission fixes the exact price, or does it fix a maximum price for you?

Mr. BARTON. The public service commission?

Mr. CLINE. Yes.

Mr. BARTON. I understand that after investigating a given case it determines whether the rates charged are fair and reasonable, and if it concludes that they are not reasonable it reduces the rate.

Mr. DIFENDERFER. What do you mean by a given case?

Mr. BARTON. Any case brought to them by complaint.

Mr. DIFENDERFER. Give us the case. Is it one of your own? Who furnishes this case?

Mr. BARTON. We have no reduction. The case would be furnished by the people who complain against the rate.

Mr. DIFENDERFER. I understand there are no individual complaints.

Mr. BARTON. In our case, you mean?

Mr. DIFENDERFER. Yes.

Mr. BARTON. No; I was discussing a general proposition.

Mr. CLINE. I want to ask for information whether the commission fixes the maximum price that you charge or whether it fixes the identical price at which you should distribute power.

Mr. BARTON. It fixes a maximum. I don't think they prevent you from charging any lower rate.

Mr. SHARP. In all cases that maximum rate is identical with the rate charged.

Mr. BARTON. I should think it would be.

The CHAIRMAN. Which company paid the larger amount of money for taxes to the city of Niagara Falls, the Niagara Falls Co. or the hydraulic company?

Mr. BARTON. The Niagara Falls Co.

The CHAIRMAN. Why?

Mr. BARTON. Because we are assessed at a higher valuation.

The CHAIRMAN. Because it owns more real property in the city?

Mr. BARTON. That is the theory, I think. Most of it is on our plant, \$5,000,000 is on our plant.

Mr. BROWN. By one or two questions I think I can bring out certain information that the committee would be interested in.

Mr. BROWN. Mr. Barton, at what cost is the power on the Canadian side delivered to the Province of Ontario by their commission over there?

Mr. BARTON. \$9.40.

Mr. BROWN. Now, at what price does the developing company deliver power in bulk at, we will say, the limit of the city of Buffalo?

Mr. BARTON. That is, our company in one case.

Mr. BROWN. Yes.

Mr. BARTON. \$16.

Mr. BROWN. In what manner is that power which is sold by the commission on the Canadian side at \$9.40—at what place is that power taken?

Mr. BARTON. I understand it is at the generating station, the generated voltage.

Mr. BROWN. Who pays for the transmission lines, the cost of the transmission line to the point where it is delivered to the city.

Mr. BARTON. The hydroelectric commission.

Mr. BROWN. Included in this cost of \$16 you get at the limits of the city of Buffalo, what is the difference in the conditions from the conditions at which power is delivered at \$9.40 on the Canadian side?

Mr. BARTON. I think I can answer that best by stating the price quoted by the hydroelectric commission.

Mr. BROWN. What does your company do before you charge this \$16 that is not done on the other side?

Mr. BARTON. The same thing, precisely. We step up to a high voltage and transmit it to the point of delivery.

Mr. BROWN. In other words, that cost of \$16 includes transmission across the river from your power plant up the river to the city limits.

Mr. DIFENDERFER. Suppose you do not take it from the Canadian side?

Mr. BARTON. The same thing; we step up and transmit.

Mr. BROWN. You transmit to the city limits of Buffalo?

Mr. BARTON. Yes, sir.

Mr. BROWN. What effect is that distance, as to whether it is expensive transmission?

Mr. BARTON. Twenty-two miles on the Canadian side and 18 miles on the American side.

We have two separate pole lines with three separate transmission circuits. On the Canadian side we have two pole lines with three separate independent circuits.

Mr. BROWN. The difference here between the two costs—that is, the cost to the Canadian side taken at the power house and the cost on the American side taken at the city limits—is approximately \$6. Now, whether considering the extra cost of transmission, and the extra cost for the investment for transmission appliances, is that a fair rate, is that extra \$6 any more than necessarily reasonable to cover the difference in cost?

Mr. BARTON. I don't think it is.

Mr. BROWN. On the Canadian side the Canadian commission has taken this bulk quantity of power at the plant on the Canadian side and transmitted it to consumers. You have spoken about a place, Bridgeburg, where the Canadian commission transmits and delivers to consumers.

Mr. DIFENDERFER. The hydraulic commission you have reference to?

Mr. BROWN. I mean that. What is that?

Mr. BARTON. It is the hydroelectric commission. It does not transmit to Bridgeburg, but the business men at Bridgeburg asked the commission to quote them a price. Our transmission lines to Buffalo run through both of those villages. They wanted to get some power from us but they were afraid that we were going to charge them too much so they asked the Canadian commission for a price, and the price quoted by the commission was a sliding scale. The village could only use less than 100 horsepower to begin with. The commission said it wouldn't transmit less than 200 and the price quoted was \$37.81 per horsepower delivered at the high tension in the village of Bridgeburg, and the municipality had to take the power and transform it and distribute it.

Mr. DIFENDERFER. How far is Bridgeburg from the power plant?

Mr. BARTON. Twenty-two miles from Niagara Falls. We are selling power at Buffalo at \$16 under those conditions precisely.

Mr. BROWN. Take the retail price to the consumer that exists at Toronto, and that at Buffalo to the consumer. Generally speaking, how do they run?

Mr. BARTON. I understand the rate established by the hydroelectric commission for power in Toronto in some cases is lower than the Buffalo rate to consumers, and in some cases they are higher. Taking the rates of the Cataract Power & Conduit Co. as a whole, I am told that the application of the Toronto rate to customers would result in a substantially larger income to the distributing company.

Mr. DIFENDERFER. The hydroelectric commission, as I understand it, transmit their power for \$12, do they not, a horsepower, in some instances?

Mr. BARTON. I think for less than that in some.

Mr. DIFENDERFER. Well, I am taking \$12 as a maximum.

Mr. BARTON. The maximum cost or selling cost?

Mr. DIFENDERFER. The selling cost—\$9.40. What they get it for.

Mr. BARTON. I don't know of any case in which they are selling for \$12. The price at Toronto, I understand, is about \$18, that is, the transmission price.

Mr. DIFENDERFER. Toronto, what is the distance?

Mr. BARTON. About 90 miles. That is not the price—

Mr. BROWN. Is that the price to the city line or the price to the consumer?

Mr. BARTON. At the city line. At transmission line voltage.

Mr. BROWN. How far is it from Niagara to Buffalo?

Mr. BARTON. Twenty-two miles.

Mr. DIFENDERFER. They charge the same price for 90 miles as you do for 22.

Mr. BARTON. Their price is \$18, our price is \$16.

Mr. DIFENDERFER. Two dollars difference.

Mr. BARTON. Two dollars difference, in our favor.

Mr. BROWN. State generally, so that the committee may have an idea, since your company and these other companies were furnishing power in Niagara Falls, what has been the development in industries in that city under the price at which you furnish power?

Mr. BARTON. I would say that the population of the city of Niagara Falls has grown from 1890 up to the present time from about 8,000 to about 35,000, and that has been entirely due to the development of power at Niagara Falls.

Mr. DIFENDERFER. At Niagara Falls, you speak of?

Mr. BARTON. Yes, sir.

Mr. DIFENDERFER. Alone?

Mr. BARTON. Alone.

Mr. DIFENDERFER. Isn't it a fact that the Hydraulic Power Co. have that as their territory? They do not distribute to any other point than that particular point.

Mr. BARTON. That is true.

Mr. DIFENDERFER. Is there competition there?

Mr. BARTON. There is.

Mr. DIFENDERFER. Between your company and the other company?

Mr. BARTON. There is.

Mr. DIFENDERFER. Do you charge any less there, or do they charge any less than you?

Mr. BARTON. I don't know what their prices are.

Mr. DIFENDERFER. Or are they the same?

Mr. BARTON. I don't know what their prices are; I have no information.

Mr. BROWN. It has been stated by the statistics that from about 1900 to about 1904 or 1905 the value of manufactured output by industries at Niagara Falls increased from \$8,500,000 up to \$16,900,000. Have you statistics showing what the increase was in the value of output by these industries between 1904 and 1909?

Mr. BARTON. Increased to \$28,600,000. An increase of about 80 per cent in five years.

Mr. BROWN. I understand the consumers complained in regard to rates for the New York commission—that is, by the consumers, they have to be signed by 100 consumers.

Mr. BARTON. That is my understanding.

Mr. DIFENDERFER. Who makes that rule?

Mr. BROWN. Do you know of a complaint being made and signed by 100 consumers?

Mr. DIFENDERFER. Is that the commission rule?

Mr. BARTON. That is the rule.

I might say in regard to that there has recently been served on the Cataract Power Co. and on us—it has been stated in Buffalo the customers of a distributing company could not serve a complaint on a generating company. That may be the law, but a complaint has been served on us. We have been notified to give an answer within

20 days. That complaint was signed by 150 citizens of Buffalo, and out of those three were customers of the Cataract Power & Conduit Co.

Mr. BROWN. Who were the others?

Mr. BARTON. I don't know.

Mr. BROWN. They were not consumers?

Mr. BARTON. Not consumers.

Mr. BROWN. Customers of the lighting company?

Mr. BARTON. I think they were.

A MEMBER. May I ask if any of the stockholders of your company are interested in that company?

Mr. BARTON. I can't say, but I think some persons there are interested in both companies.

Mr. DIFENDERFER. They are interested in all of those companies, are they not? Possibly that is your answer to there not being a gentleman's agreement. That may be your answer to that proposition. It isn't necessary.

Mr. BARTON. Why should there be a gentleman's agreement? Is there anything that is secret? The whole thing is open and above board. There is a lighting company doing business there. They were there, and there is no reason why we should duplicate their investment.

Mr. CLINE. Then those who have these other two companies—members of your company that have an interest in these other two companies you speak of—also share three different profits, do they not?

Mr. BARTON. I presume that is the case, but three different profits, each of which represents a different investment.

Mr. BROWN. Has the Niagara Falls Power Co. or the Cataract Co. any controlling interest in this electrical company, the lighting company?

Mr. BARTON. None whatever.

Mr. BROWN. The common interest is simply the result of accident that one stockholder may hold some stock in both.

Mr. BARTON. It came about in this way: When the Niagara Falls Power Co. was organizing a distributing company in Buffalo, the lighting company was asked whether it wanted to buy all this power that we were going to furnish to Buffalo, and it decided it wouldn't take the risk. Its directors thought it wasn't wise to involve the property of their shareholders in that project. But one or two of the gentlemen interested in the lighting company took the matter up and undertook to organize a local distributing company in Buffalo, and that was done.

Mr. BROWN. State, Mr. Barton, what has been the dividends paid by the Niagara Falls Power Co. down to the present time.

Mr. BARTON. In 22 years the company has paid eight dividends of 2 per cent each.

Mr. DIFENDERFER. What are the salaries of the gentlemen who are interested in this—then we will come nearer the profit?

Mr. BARTON. They are inadequate, I should say. They are on record in the files of the public-service commission, if you are interested.

The CHAIRMAN. I received a telegram from the Rev. Dr. Lyman Abbott, editor of the Outlook. If there is no objection it will be



read and incorporated in the hearings. The telegram reads as follows:

NEW YORK, January 25, 1912.

HON. WILLIAM SULZER,

*Chairman House Committee on Foreign Affairs, Washington, D. C.:*

May I urge upon you favorable consideration of the joint resolution for the extension of the provisions of the Burton Act for the preservation of Niagara Falls? I believe that Congress should take this action for three reasons: First, Congress has already decreed that Niagara Falls shall be preserved by the Federal Government; second, the report of the Army engineers has shown that the Falls are already injured and are in danger of further injury; third, the Burton Act has proved itself an effective instrument for the protection of Niagara.

LYMAN ABBOTT.

### STATEMENT OF PROF. JAMES HENRY HARPER.

The CHAIRMAN. Mr. Harper, you may proceed.

Prof. HARPER. I do not represent any interest in this large question, except the 90,000,000 people in the United States.

I want to contribute, if I can, a little light to the subject of the preservation of the Falls. As a preliminary proposition, I believe you have some pictures here showing the run-off of the Falls at the time when it was the lowest rainfall within the lifetime of any individual present. I want to make that very prominent.

We are passing just at the present time the crest of a drought greater than that within the knowledge of any man living here or likely to be. These periods of minimum rainfall occur largely and affect largely the interior, and consequently have a very pertinent effect upon the flow of the Niagara Falls, because it is entirely the drainage of the table-lands in the territory back in the interior that the Falls depends upon for their flow.

With that I have been preparing some figures on this, the history of the rainfall and the drought, which will be published, I suppose, but I want to state that we have just passed or are passing that period of three years of maximum drought. This is the crest of that period, and that will not occur again within the lifetime of any individual here.

The CHAIRMAN. Has the rainfall, so far as you have been able to find out, increased or diminished along the Great Lakes for the past 60 years?

Prof. HARPER. The rainfall has necessarily decreased because we have cut away nature's sponge, the diminution of the timber supply around that area has been the largest factor, and the prime factor in the diminution, if there has been any, the run-off at the Falls. I have no interest in them, nor do I hold any briefs for a power company of any kind.

The CHAIRMAN. Is it your observation that the Great Lakes are receding?

Prof. HARPER. Not at all. The rainfall period will determine the volume of run-off and the very fact that there are some large impoundments of water and large power development which 20 years ago were not in evidence at all in that territory, has contributed materially to a bettering or steadying this flow of Niagara. As a matter of fact the power development that Niagara now has contributes to the flow of Niagara. The power development and the

impoundment of water in those areas has helped to relieve the situation that the cutting off the timber has brought about, and the more power development, the larger impoundment of water taken care of at the low stages. In other words, the larger power development that takes place back of Niagara Falls the steadier will be the flow of Niagara Falls. It is only during the low period that people are talking about the preservation of the Falls, or anyone else is interested. The run-off wouldn't be reduced in inches appreciably if there were to be another 20,000 feet of water taken there.

Mr. SHARP. Do you claim that the cutting away of timber diminishes the rainfall?

Prof. HARPER. Certainly not, only the rainfall, not only the natural precipitation, but it immediately puts that water on its way.

Mr. SHARP. I understand that, but in what way does it diminish the actual precipitation, the cutting away of the timber?

Prof. HARPER. That would call for quite an extended observation, but in simple terms anything that destroys the sponge, nature's sponge for the retention of that rainfall, affects the run-off.

Mr. SHARP. I understand that, but what—

Prof. HARPER. The cutting off in timber has brought about a lessening in the carrying power that is within the basin, we will say, of these Great Lakes, and a lessening of the precipitation, and it has thrown the precipitation closer to the coast line. Our precipitation here in Washington will be sustained and at times in New York during the crest of this drought the precipitation in New York was phenomenal, but that was the result of the precipitation being carried farther inland in drought periods. Nature proved that. During a number of years the precipitation has been nearer to the coast line. And that is a sort of a balance. Nature provides for that.

Mr. SHARP. Does it diminish the precipitation from the clouds, the cutting away of the forests? I can understand how the forest acts as a sponge and retains the moisture and that it doesn't flow away so rapidly, but I would like to know how it interferes with the amount of precipitation, because I understood that there is a good deal of controversy on that subject, and I would like to get your view of just why that action takes place.

Prof. HARPER. There is a wide difference of opinion even among the scientists on that subject, but I might give you an opportunity to speculate a little bit on that subject by stating some conclusions that I have arrived at myself in dynamics, which govern primarily the periods of greater and lesser precipitation.

The sun, which is our center of energy, is a large magnetic mass, not in combustion, and bearing no relation to the ancients of the fiery furnace, but simply a magnetic mass. That source of energy is magnetic, entering our sphere and causing the phenomena of lightning and the extreme local phenomena of caloric energy. The caloric energy determines the rainfall and the growth of plant and animal life. That is the basis of some research work that has been going on on my part for over a third of a century, and the basis of the prediction on my part that we were to pass through a drought period by reason of the occurrence of the sun spots. I made some mathematical calculations of that.

I had a photograph made of the sun spots and discovered that we would have a diminution, possibly, mathematically determined, per-

haps as high as 5 per cent of the sun's energy. That brings about a drought period. That controls the whole operation.

Mr. SHARP. So the existence of sun spots has to do with disturbances of the atmosphere?

Prof. HARPER. Not only the atmosphere, but seismic, pestilence, drought, famine, and others.

Mr. SHARP. The sun spots, you think, were the primary cause?

Prof. HARPER. Yes, sir; and some others.

Mr. SHARP. What relation has the lessening of the forests to the production of sun spots?

Prof. HARPER. Now you have got a subject that is large enough for—

Mr. SHARP. I studied it myself for 30 years, and I think I know something about that question, and I was curious to get your views on the same.

Prof. HARPER. You had got enough to make deductions that any good mathematician could make and our good astronomers. Scientists have really accepted that theory.

Mr. SHARP. Professor, I don't think I will take issue with you on the connection of the sun spots with the phenomena that we see here, but I have long been of the opinion that the mere cutting away of the forests has very little to do, if anything, with the actual precipitation and the moisture; not with the holding it back, but that the cutting away of the timber lessens the precipitation and the moisture it would seem to be rather a far-fetched conclusion.

Prof. HARPER. It does really lessen it—

Mr. SHARP. There is some doubt that it has anything to do with it at all.

Prof. HARPER. Not to my mind. I think if you follow my—

The CHAIRMAN. Mr. Harper, get down from sun spots to this mundane sphere, and tell us what you have to say about this legislation.

Prof. HARPER. I thought that statement to you, gentlemen, that the relation of the scenic beauty of the Falls to the present employment of water for power which has been carefully determined by very good and competent engineers—the run-off can be had without any apparent effect upon the Falls, and as I have endeavored to show, and which is deducible to mathematical terms at the present, there has been an extreme diminution of rainfall on the table-lands, and the scenic beauty of the Falls during the year just past hasn't been materially affected. The few thousand or more feet run-off that is called for by the bill wouldn't have any effect at all.

I desire to speak further upon the proposition of the impoundment of water. George Washington had a plan for impounding in large basins the water of the Potomac River, and he proposed slack-water navigation for two purposes—for power and navigation and for control—it is one of the most intelligent briefs on the subject that we have got, including the best of our engineers for a hundred years since.

The CHAIRMAN. George was a great man.

The committee will now take a recess until 2 o'clock, and the hearings will be closed this afternoon. The committee has been very patient and courteous to all of the gentlemen who have come here, and we have tried to give you as much latitude as possible to get

your view on the legislation which is before the committee. This committee is very busy, and we must close these hearings this afternoon. We will go on from 2 o'clock until 5, three hours, and I hope you gentlemen who want to be heard will get together and agree about how much time you want.

Mr. CURLEY. I was going to ask that a part of the report compiled by Dr. McLaughlin in his report, on page 47, be included in his remarks, that portion relative to distribution of typhoid fever in the State of New York.

GEOGRAPHICAL DISTRIBUTION OF TYPHOID FEVER IN THE STATE OF NEW YORK.

In the cities of New York State with good water supplies the typhoid death rate is low, as shown by the following table:

Cities.	Rate per 100,000 of population.	
	1909	Average for 10 years.
New York.....	12.7	17.0
Rochester.....	8.6	13.7
Syracuse.....	11.1	14.8
Binghamton.....	13.1	20.9
Utica.....	15.8	17.3
Olean.....	11.1	18.5
Amsterdam.....	11.9	18.6
Johnstown.....	.0	17.1

On the other hand, those cities using unfiltered water from contaminated rivers have a high typhoid rate:

Cities.	Average rate per 100,000 of population for 10 years.	Source of supply.
Niagara Falls.....	129.1	Niagara River.
Cohoes.....	83.8	Mohawk River.
Lockport.....	51.5	Erie Canal and recently Niagara River.
Oswego.....	49.8	Oswego River.
Ogdensburg.....	48.5	Oswegatchie River.
North Tonawanda.....	34.1	Niagara River.
Tonawanda.....	31.5	Do.
Rome.....	21.7	Mohawk River until 1909, now Fish Creek.

Thereupon, at 12 o'clock, the committee took a recess until 2 o'clock p. m.

## AFTER RECESS.

The committee reconvened, pursuant to the taking of recess, at 2 o'clock p. m.

## STATEMENT OF RICHARD B. WATROUS.

The CHAIRMAN. Mr. Watrous, you can proceed. Do you want to put that document in the record as part of your remarks?

Mr. WATROUS. Yes, sir. As part of the remarks of Mr. McFarland.

Mr. Chairman and gentlemen, by reason of the fact that we have had access to House Document No. 246, only after the closing of the hearing held on Tuesday last, we find it necessary to present to you, in summarized and easily understandable form, the exceedingly important information contained in that document, entitled "Preservation of Niagara Falls," which has a vital bearing on the legislation before you.

1. In this document there has been collected and presented for the first time, by the engineers of the lake survey, authoritative information to show exactly the conditions prevailing at Niagara Falls up to the comparatively recent date of June, 1911. On pages 15 and 16 of this Document 246 are given details as to power produced from Niagara water, on both sides of the international border.

It appears that the two power plants operated on the United States shore were producing in June, 1911, a total of 165,010 electrical horsepower, and that the three power plants operated on the Canadian shore were producing, at the same time, 133,000 horsepower. The aggregate represents a total production of 298,010 horsepower, from water abstracted from the glory of Niagara, as of June, 1911.

It further appears that while of this total there is produced on the Canadian side nearly 47 per cent, the use of Niagara-generated electric power in Canada is but 16.6 per cent of the total production.

That is, the three Canadian plants (two of them owned and operated by citizens of the United States) make nearly half of the total power taken from the glory of Niagara, but sell for use in Canada barely one-sixth of the total.

In fact, it is probable that but one of the so-called Canadian plants—and that the smaller one—could operate upon the load furnished within the Province of Ontario. Thus the much-vaunted increase in Canadian manufactures, said to have been brought about by the availability of electric power, proved before your committee on Tuesday last to be obtained at barely half the price charged consumers in Buffalo for the same power, has amounted to but 49,500 electrical horsepower.

It is interesting in this connection to call your attention to the prospectus of the hydroelectric power commission of the Province of Ontario, which in its first report, published April 4, 1906, says, on page 7:

"They are satisfied that a market for at least 50,000 horsepower could be obtained within a reasonable radius of Niagara Falls as soon as transmission lines can be constructed, and this could be increased to at least 100,000 horsepower within five years thereafter."

The actual development, concerning which the Canadian company, most desirous of sending increased power into the United States, has given you alarming reports, has not proved equal by any means to the optimistic view had of it in 1906.

It is obvious that it is the practically unrestricted and completely doubled prices charged consumers in the United States that have made the American producers of power in Canada so anxious to have your committee aid in extending, at 100 per cent advance, the beneficent opportunity to further deplete the beauty and impressiveness of Niagara Falls, from which effort they are now restrained by the provisions of the Burton bill.

2. It is in point to call your attention to the fact that at the average prevailing efficiency—namely, 12 electrical horsepower per cubic foot of water taken from Niagara Falls—the combined treaty diversion would produce 672,000 horsepower. This is more than double the production as reported in House Document 246, which document, on page 13, again reiterates the conclusions of all the engineers who have impartially studied this problem, to the effect that—

"The artificial diversions of the power companies have materially added to the injury or interference with the scenic grandeur of Niagara Falls. Additional diversions now contemplated will increase this damage."

The increase to the treaty permissions, which are in no sense obligatory, would mean the development of two and one-quarter times as much power at Niagara Falls as was being developed there in June, 1911, and it is not improper to assume that interference with the scenic integrity of Niagara Falls, which it was the plain and only purpose of article 5 of the Canadian treaty to preserve, would be in that proportion. Again we quote from page 12 of House Document 246:

"On the depth and volume of flow over the cataracts, and on the continuity of the crest lines \* \* \* depend largely the character of spectacle that it is desired to preserve."

3. On page 16 of House Document 246 may be found significant data on the prevailing efficiency of the use of the water by all the power plants operating at Niagara Falls. Taken into account with the admittedly deficient operating heads now in use, the efficiency is given as but 63 per cent, or not two-thirds of the available power which might be obtained.

But on the basis of using the full 220-foot head which is said to be practicable, the total efficiency of all the plants is but 48 per cent, or less than half that suggested as possible.

As we had the honor to insist on Tuesday before your committee, the water of Niagara is precious water; it belongs to all the world and is of immeasurable value, both from the scenic, the patriotic, the financial, and the conservational points of view, to the people of the United States and Canada. Every foot abstracted from the productive and God-given glory of the Falls ought to be made to produce the utmost possible amount of power, and not the easiest possible amount.

So long as the companies producing power at Niagara Falls are found by impartial Government engineers to be operating under an efficiency of only 48 per cent, it is respectfully, but insistently, urged that they have absolutely no right to ask for further diversions, depletions, and injuries to this, our principal American scenic asset.

4. The specious character of the plea made for the free and unrestrained admission from Canada of power produced there, we have outlined to you. With the known fact that the three large companies operating in the United States and in Ontario draw from the upper pool, equally depleting the whole cataract, and that the two remaining companies draw directly and entirely from the much endangered Horseshoe Fall, which is as much American as Canadian, we are confident that no member of this committee will be found to assume that it is a matter of indifference as to what Canada may do—when the doing in Canada is by American citizens, and so overwhelmingly for possible American consumption.

The guilt of the Federal Government is as great in respect to the proceeding destruction of the glory of Niagara Falls for every horsepower admitted from Canada as for every horsepower developed in the United States.

It is further obvious that if proper restraint is had upon the importation of electrical power from Canada, it will be many years before the damage will become more serious. With loss of 50,000 horsepower in use now of the 432,000 horsepower it is expected to produce under the treaty diversion on the Canadian side, there will be time for sentiment to form in Canada, which will inevitably be formed and will prove as effective in demanding the scenic preservation of the Falls as it has so far proved in the United States.

Gentlemen, if you so act as to hold down the spoilers of Niagara to the amounts which have been given them to protect their investments, with a fair profit to all enterprises going at the time the will of the people was manifested in the United States, you will be doing justice, and full justice, to every honest interest represented, and respecting as well the overwhelming desire of the American people to have, see, enjoy, and hold in reserve, no further damaged, the scenic glory of Niagara Falls.

Respectfully submitted.

AMERICAN CIVIC ASSOCIATION,  
By J. HORACE MCFARLAND, *President*.  
RICHARD B. WATROUS, *Secretary*.

Mr. WATROUS. Following Tuesday morning, when we adjourned, I might say, Mr. Chairman, that this statement is a paper presented

upon the reading by Mr. McFarland of the latest report returned to the House—Document No. 246, which includes the figures of diversion up to the expiration of the present bill.

I would like to ask, Mr. Chairman, if you have any knowledge when the committee is going to have the benefit—when this is going to be delivered to you?

The CHAIRMAN. We expect to close the hearings to-day. Just so soon as the reporters can have the minutes transcribed they will be corrected by the various speakers and sent to the Public Printer.

Mr. WATROUS. You expect, of course, to use these documents?

The CHAIRMAN. Yes.

Mr. Cohn desires to be heard further.

Mr. COHN. The statement was made here that the companies at the present time are utilizing but 13,800 cubic feet of water. That statement was based upon a report of some officials of the War Department made in June, made as on June 11, in which it was stated that the Niagara Falls Power Co. was using 7,870 cubic feet of water per second, whereas it has a permit for 8,600 cubic feet; that the hydraulic company was using 3,350 feet per second, whereas they were allowed 6,500 feet, and the other company was using 400 feet per second, whereas it has a permit for 500 feet per second.

The suggestion was made, I think by Representative Cooper, that that might have been with the same purpose. That the full amount was not used as that other company could not under the existing law get any power beyond 16,600 cubic feet, although the law allowed the Secretary of War under certain conditions to grant permits in excess of those, either under the Burton bill. I wish to say there is no such purpose on the part of anyone that the use of the water is fluctuating, and that permits in excess of 16,600 cubic feet, the extent of the bill, they must, under the terms of that act, be granted to the existing companies. I just state that to answer any argument of that character.

I wish to say, in the second place, that our company, the hydraulic company, has at no time professed to waive its common-law riparian right, or the rights under its grant from the State of New York, but it accepts the permit from the Secretary of War because the whole subject of permits under the Burton bill was assumed to be a temporary affair.

The third statement I wish to make is in respect to one matter this morning, with reference to the water of the Niagara River, that was used for domestic purposes at the city of Niagara Falls.

The city of Niagara Falls is now installing and will have completed by June a suitable filtration plant so that the question of the water of the Niagara River used for domestic purposes does not enter into this affair in any way. I would like to have the chairman call upon the representatives of the War Department present to give the actual user in cubic feet per second of water for power purposes by the companies, according to its last report.

The CHAIRMAN. Mr. Brown, is there anything further you desire to say?

Mr. BROWN. Nothing orally, Mr. Chairman, except possibly this, that the position of the Niagara company is the same in regard to this last matter stated by Mr. Cohn for the hydraulic company. We took the permits as a temporary matter, never having waived our right, and as said here the other day we have called your attention

to our legal rights, not for the purpose of telling you what we are going to do, or what you have got to do, but just to emphasize the equities that should be considered in our favor.

Under the chairman's permission given the other day, I shall ask at the close of these hearings to file a brief summary, including possibly answers to propositions that have been made as they occurred to me.

Mr. GARNER. Supposing that Congress should decide not to permit any water to be taken out of the Niagara River on the American side on the ground that it injures navigation, and upon an investigation of the facts the courts should determine that it did not injure navigation, although Congress on that ground refused to permit water to be taken from it. What would be the result of a contest in the courts? Or, in other words, if I may put the question in this way: If Congress should find that it would injure navigation to permit 20,000 cubic feet per second to be taken, and by legislation should prohibit any portion of it to be taken, and you should go into the courts and contend that the findings of Congress were erroneous and establish that fact to the satisfaction of the court, that it did not interfere with navigation, would you still be entitled to take 20,000 cubic feet per second?

Mr. DIFENDERFER. Under the treaty.

Mr. BROWN. In the first place, let me say if I could predict always what the findings of the court would be, the function of a lawyer would be done away with.

It is the uncertainty in the solving of these problems in these matters before the courts, that we help to bring about a solution. I could not predict, sir, what a court would say, and I can only say what in my opinion they ought to say and what I would advise a client they ought to say under the law as I see it to be.

In that connection I would say to my client that the United States Supreme Court has already held in the drainage case in Two hundred United States that legislation by Congress where it attempts to limit private rights, where it tends to usurp private rights, the function of Congress in legislating or limiting upon personal or private rights, is stated by the United States Court that the exercise of such powers must have a "substantial relation to the public objects which the Government may legally accomplish," and further on the court says that the exercise, or attempted exercise, of any power by the United States Government—or any Government in these matters—must not be "arbitrary or unreasonable, or beyond the necessities of the case."

Those are from the United States Supreme Court in Two hundredth United States. On the same principle I should also quote to my client as laid down by the State of New York in a Niagara decision, where they say "not even a State has the liberty to interfere with the riparian rights of the relator arbitrarily, but such interference, if attempted, must be in the interest of some substantial right of the State affected by the exercise of the rights of the riparian to the use of the water of the river." (70 App. Div., 543.)

Such principles as that I should present to my clients and advise them that they had rights which would be protected in the courts.

Mr. DIFENDERFER. At that point—supposing there was a tributary branch, we will say, a river supplying a navigable stream, would a company have a right to dam up and divert that water, or



could the United States Government prohibit them from doing that thing?

Mr. BROWN. To get the question clear, Mr. Difenderfer, you mean by diversion to divert it away and have it returned to the stream?

Mr. DIFENDERFER. Never returned to the stream. The Government would have a right, would it not, to interfere in a case of that kind?

Mr. BROWN. Not only the Government, but every riparian owner below, because under the law when a man diverts water from a stream—and the same principle applies whether it is navigable or unnavigable—makes any substantial diversion—he must return it to the river. If by not so returning it the lower riparian owner suffers, or if the public suffers, they each and both have a remedy.

Mr. DIFENDERFER. I believe there is a Rio Grande decision of the United States.

Mr. Cline. There is a Colorado decision, too, on that point.

Mr. BROWN. Yes, but you must remember that the Colorado decision and in some respects the Rio Grande decision are decisions which are not based upon riparian rights. The decision there is based upon what we call the law of "prior appropriation," that if any man goes in upon a stream and diverts the water, and carries it away for irrigation for instance, he does not have to return it, and he gains a prior right over every subsequent user, whether that subsequent user be a riparian or any other person. That law exists in Colorado.

It is for the same reason that the decision read by Mr. Watrous, the Colorado decision, is all right in its place, but it does not apply here. That Colorado decision read the other day is where a man upon a stream had a waterfall which was attractive, and he had used it in beautifying and developing his place, his summer resort. Afterwards, somebody above tried to divert some of the stream. The scenic-beauty man said that he had appropriated this fall as a part of the beauty of his property and he claimed it by prior appropriation. A subsequent man can not get rights against him, and the courts sustained him.

Mr. CLINE. I don't want to make this tedious. Do you claim that your company is now seeking to exercise all the rights conferred upon them as riparian owners by the common law of the State of New York, or haven't they submitted some of those rights to the jurisdiction of the Secretary of War, or the jurisdiction of the commission of the State of New York?

Mr. BROWN. In answer to your question, sir, speaking for the Niagara company, we have riparian rights, vested property rights, beyond the extent that they have been exercised under any permits or as measured by any permits from the Government. Temporarily, and having regard for scenic beauty, they have submitted to provisions which have limited them to a certain use which is less than their legal rights.

Their taking the permits from the Government did not in any way constitute a submission of their rights to what is claimed—the right of the Government to dictate under the present law. They simply submitted as a temporary matter. For instance, our company had a capacity already developed, which required, for an economical operation, 10,000 cubic feet a second. The present law

limited that to 8,600. They submitted to that only as a temporary submission, until the thing should be adjusted, and we want to claim our right to have the use of 10,000 cubic feet. We don't expect you to fix that in detail, but expect that to whatever body you leave that to we may show our equities that that body may have the power at least to consider them.

In the same way, the hydraulic company needs 3,000 more in order to develop full capacity by operating at what will be a normal point of economy, and I say for them that they ought to have their 3,000.

**STATEMENT OF MR. PHILIP B. BARTON—Resumed.**

Mr. HARRISON. When was the Cataract Co. organized?

Mr. BARTON. About 14 years ago.

Mr. HARRISON. About 1898? What was the organized capital at that time?

Mr. BARTON. It was in 1895 or 1896 it began business, I think.

Mr. HARRISON. What was the capitalization?

Mr. BARTON. The present capitalization is \$2,000,000 stock and something under a million dollars and a half in bonds.

Mr. HARRISON. What was the original capitalization of that company?

Mr. BARTON. Authorized, you mean?

Mr. HARRISON. No, sir; paid in.

Mr. BARTON. I can't give you that.

Mr. HARRISON. I understood you to say this morning that a majority of the stock is owned by the Niagara Falls Co.

Mr. BARTON. That is true.

Mr. HARRISON. How much did that cost?

Mr. BARTON. Niagara Falls Power Co.?

Mr. HARRISON. Yes.

Mr. BARTON. That stock was given to the Niagara Falls Power Co. as part of a consideration for the power contract and for the franchise in the city of Buffalo, the Niagara Falls Power Co. had obtained.

Mr. HARRISON. In other words, the Niagara Falls Power Co. paid nothing in cash or nothing in property except that it gave up the right to enter the city of Buffalo to distribute their power there.

Mr. BARTON. That partly is true. Their franchise in Buffalo also is a concession in price.

Mr. DIFENDERFER. It was a present, in other words.

Mr. BARTON. No; it wasn't a present. There is a very substantial consideration in the power contract, the very low price at which power was sold to the company was part consideration.

Mr. DIFENDERFER. That was the consideration at that time, a concession, was it?

Mr. BARTON. It was.

Mr. DIFENDERFER. At about how much would you approximate the value of that concession?

Mr. BARTON. Well, under present conditions the Cataract Co. is paying 6 per cent dividends. The Niagara Falls Power Co. is getting about \$60,000 for its share of those dividends, \$60,000 a year, and at the present rate power is delivered, about 65,000 horsepower, it would be about \$1 a horsepower.

Mr. DIFENDERFER. Per year?

Mr. BARTON. Per year.

Mr. HARRISON. Is this company, the Niagara Falls Co., is that the company that Morgan is interested in?

Mr. BARTON. I am not sure that Mr. Morgan personally is, but the J. P. Morgan Co. is a large shareholder of the company.

The CHAIRMAN. Congressman Smith desires to be heard.

#### STATEMENT OF CHARLES B. SMITH.

Mr. SMITH. I desire to ask, Mr. Chairman, if Mr. Kenefick wishes to say anything.

I will read, with the committee's consent, two letters which I received from Buffalo, which tend to show the attitude of the people of that city.

The first one is from Mr. Frank C. Ferguson, a leading lawyer of the city, who wanted to come before the committee but was unable to do so because he had to appear before the Interstate Commerce Commission. This is what he says:

FERGUSON & MAGAVERN,  
Buffalo, N. Y., January 20, 1912.

HON. CHARLES BENNETT SMITH,  
Washington, D. C.

DEAR SIR: I am glad that you are taking such a great interest in the two Niagara Falls power questions, the question of the production of electrical power on this side of the line, and the question of the importation of Canadian power.

I hope that these things may be made plain to the committee, notwithstanding the fact that the great public does not find it so easy to go, or send its agents, to Washington, and get their views directly before the authorities, as to the power companies.

1. That while electrical power is produced by the use of the Niagara Falls current at a low cost to the producers, the public, on this side of the international boundary line at least, have never received any benefit from that decreased cost of production. On the contrary, it has always had to pay exceedingly high rates. Indeed, the city of Buffalo particularly is worse off to-day than as though no electrical power at the Falls had ever been developed. In anticipation of cheap Niagara Falls power, it advertised itself far and wide as the electrical city. Owing to the fact that it has always had to pay excessive rates for power, it could not and did not "make good" in its claim, and the reaction that followed when the outside world found out the facts has harmed it greatly. You know this as well as I do, but people living 500 miles from Buffalo do not generally know it. I wish that the committee could have one of its hearings at Buffalo, in order that it might find out what the local sentiment in this matter really is.

2. Any sentiment in western New York that any of the power companies should be given the right to use any more water than they now have the legal right to use, is strictly confined to the power companies themselves, their agents and servants. All of the rest of the public believe either that no additional water should be used for the development of electrical power, or that the additional 4,400 cubic feet of water which the treaty allows to be taken, should be turned over to the State of New York. Leaving out of account the matter of the injury to the natural beauty of the Falls by the diversion of water, it would, of course, be to the manifest advantage of the public to have additional electrical power developed at the Falls, if the public could thereby get the power at a reasonably low rate, as it probably could if the present electrical power monopoly should be broken and the additional current or power development be turned over to the State of New York. The production and distribution of electrical power at the Falls at the present time is an absolute monopoly, and it would not interfere with that monopoly in the slightest

degree to give to the present companies the right to take increased amount of current.

As long as the development of Niagara power remains a monopoly in private hands I have no confidence in our ability to get electrical power at a fair rate through the public service commission.

3. Every restriction on the importation of Canadian power should be at once removed. Electrical power is a "raw material" and should be "free." Electrical power has of itself no value. It is simply an instrument to produce value.

4. Subject to the paramount right of Congress over navigation and commerce, its treaty-making rights and its control over imports, the National Government has really no legal right to interfere with the State of New York in the matter of the development and sale of Niagara power.

I hope that the hearings before the committee will not be concluded until the authorities of the State of New York shall be heard upon these two subjects—of the production and importation of Niagara power and until the committee shall be well informed as to the real local sentiment in western New York.

Yours, very truly,

FRANK C. FERGUSON.

That is from Mr. Ferguson. Another letter received this morning is from Charles M. Heald, president of the Mutual Transit Co., one of the leading transportation companies on the Great Lakes:

BUFFALO, N. Y., January 23, 1912.

HON. CHARLES BENNETT SMITH,

*House of Representatives, Washington, D. C.*

MY DEAR SIR: I have just read a letter recently sent you by Mr. Frank C. Ferguson, of this city, bearing on the question of Niagara Falls power.

I am heartily in accord with the position taken by Mr. Ferguson, and I feel absolutely safe in saying that in all probability 90 per cent of the citizens of Buffalo would concur if they had the opportunity to pass an opinion upon this question.

While I am not aware, of course, as to what it costs to produce this electrical power, I am sure it is produced at a low cost, but, unfortunately, the users of it on this side of the international boundary line have never yet been able to secure the power at anything like the proper figure.

To properly conserve this power for the interest of the people who have the right to it—and that is the people at large—I feel the concession of any rights should be invested in the State of New York and not in private companies; as our experience with the latter up to this time has not been at all satisfactory.

Electrical power is, as Mr. Ferguson expressed it, a raw material; it is of no value whatever until it is put into use or, in other words, "manufactured," and therefore, as raw material, it should be admitted to this country free.

The State of New York, subject, of course, to Congressional and National Government control, should have vested in it the right to control; and through such control, if properly conducted, of course manufacturing industries generally would get the benefit of this cheap power, which they certainly are entitled to.

I trust this matter will not be disposed of before all parties of any importance may have an opportunity to be heard before the committee, especially the New York State authorities.

This question of the use and control of the Niagara Falls power is of vital interest to this section of the State, and I trust it will receive your earnest attention and support.

Yours, very truly,

CHARLES M. HEALD, *President.*

I have also here a letter from Senator Burd, of Albany, which I will have placed in the minutes.

COMMITTEE ON FOREIGN AFFAIRS,

*House of Representatives, Washington, D. C.*

GENTLEMEN: A matter of large importance to our whole State, and especially to the city of Buffalo and its environs, is now pending before your committee, I am informed. I refer to the further diversion of water above Niagara Falls for power purposes.

If it had not been for the efforts of Hon. Charles B. Smith, now Congressman from the district in which I reside, I am certain our State, and especially our locality, would have lost the direct benefit coming from this additional water.

He first, as editor of the Buffalo Courier, directed attention to the subject, and has since continued his efforts in this behalf.

Our people will insist and our State will insist on these points:

1. The paramount and exclusive rights of the State in all pecuniary benefits coming from the water diversion; it is legally their property, subject to commerce clause.

2. There must be no more grants in perpetuity or without adequate compensation, payable to the State, and only granted by the State's permission.

3. The residuum of water at Niagara Falls should at once be granted the State.

4. The State, and I believe Congress, should insist on restrictions in the grant as regards prices, and uses, and should aim to approximate a maximum of power.

5. I have introduced, and had passed in the legislature, different resolutions covering some or all the above; and I am certain our people will not condone any waste of their remaining patrimony along this line.

Respectfully,

Geo. B. Burd.

I have also a petition from the people of Niagara Falls, N. Y. I believe about 50 residents of that city signed a petition in favor of having the rights to control the water turned over to the State of New York:

Whereas the rates charged for electric lighting and for power at Niagara are unreasonably high, considering the world's greatest power development is within our gates; and

Whereas we have been unable to get relief from the public service commission of New York State:

*Resolved*, That we urge upon the Committee on Foreign Affairs the incorporation of a provision in the proposed law which shall give full authority to the Federal or to the State authority, or to both, to grant to the city of Niagara Falls such diversion of waters as the city may require for public uses, and that copies of the foregoing shall be forwarded to Representative James S. Simmons and to Representative Charles Bennett Smith.

E. L. Brown, president Third Street Business Men's Association; T. H. Wallis, vice president Third Street Business Men's Association; H. J. Storck, secretary Third Street Business Men's Association; B. J. O'Reilly, treasurer Third Street Business Men's Association; Otto W. Krueger, J. E. Paterson, Chas. C. Hannel, John K. Kammon, H. M. Gous, Welch Bros., Paterson Thompson Co., Loud's Piano Co., Abe Walkens, Daniel Rinkhoff, Harry Abelson, Christ Blessing, Niagara Importing Co., McGraw & Crowley, McKunnie Bros., Ely Orcles, Nate H. Jacobs, Chas. N. Pochel, J. H. Ellenban, S. M. Ward, Carnum Buttnus, John P. Dolan, Joseph G. Rowen, C. M. Thomas, Geo. A. Adler, John E. Seager, members Third Street Business Men's Association.

I have also some official records of the public service commission which I would like to place in the record. They indicate a close affiliation among the power and transmission companies operating at Niagara Falls.

On the general question of this legislation I believe the first proposition that would be considered by the committee is that of the preservation of the scenic beauty of Niagara Falls.

Gen. Bixby has been before the committee. He has given the results of investigations made by the War Department on water diversions along Niagara River. I believe the committee may safely rely on the recommendations of the War Department in that particular. You have a representative here for Mr. McFarland and have his views, which are entitled to consideration and respect. To my mind, however, the investigation of the War Department has been thorough, and I believe the conclusion reached by its engineers ought to be final.

We next come to the efficiency of production at Niagara Falls. A statement was made by Mr. Sawyer, one of the first speakers, that we have practically a power famine in and around Buffalo. That is quite true, but I would like to call the attention of the committee to this fact, that the Niagara Falls Power Co., according to the best information obtainable, is producing about 10 horsepower for every cubic foot of water diverted, and the hydraulic company, which takes its water from nearly the same level in the river, produces 20 horsepower. I believe that new legislation decided upon by this committee should contain an emphatic efficiency clause so that the Niagara Falls Power Co. would be compelled to produce more power per cubic foot of water or relinquish its rights to a company which will produce power at a higher standard of efficiency.

Mr. GARNER. Where would you have placed that power? Would you have Congress provide in the bill the degree of efficiency that should be maintained by the power company, or would you leave that to the War Department or to some other department of the Government?

Mr. SMITH. I have prepared a provision on that point, and I would like to read it to you here.

Mr. Smith read as follows:

SEC. 2. That the Secretary of War is hereby authorized to grant to the State of New York revocable permits for the diversion of water in the United States, from said Niagara River, above the Falls, to an aggregate amount not exceeding a daily diversion at the rate of 20,000 cubic feet of water per second: *Provided*, That whenever the Secretary of War shall determine that the diversions of water herein authorized, in connection with the amount of water diverted on the Canadian side of the river, above the Falls, interfere with the navigable capacity of said river, or its proper volume as a boundary stream, or the scenic grandeur of Niagara Falls, or that the water diverted for the development of electrical power are not being utilized to their full or proper standard of efficiency, he may revoke said permits, after giving notice of not less than one year to the State of New York, the President, and the Congress of the United States of his intention to make such revocation.

Mr. HARRISON. That only applies to power diverted on this side.

Mr. SMITH. Yes.

Mr. HARRISON. Does that apply to power brought over from Canada?

Mr. SMITH. I have that question covered in another section, which reads as follows:

SEC. 3. That the Secretary of War is hereby authorized to grant permits for the transmission of electrical power from the Dominion of Canada into the United States; and the said Secretary may specify the persons, companies, or corporations by whom the same shall be transmitted, and the persons, companies, or corporations to whom the same shall be delivered: *Provided*, That no permit for such transmission or delivery of power shall be given by the Secretary of War without the full approval of the State or States into which said power is to be transmitted or delivered and that the persons, companies, or corporations receiving such permits for transmission or delivery shall be governed and regulated as to rates and otherwise as the State or States may determine.

Mr. GARNER. Let me make a suggestion there—the word “State” is rather broad. Hadn’t you better make that the Government, the governor of the State? The word State might contemplate the legislature.

Mr. SMITH. I took that provision from a law that is on the statute books. I would be perfectly willing to make any change to cover the point raised.

Mr. GARNER. If the Secretary of War would want to ascertain under what provision, the last provision of your suggested amendment, would he go to the governor or the legislature? You say the State. There ought to be some provision, it seems to me, designating, for instance, who the Secretary of War could deal with under that provision.

Mr. SMITH. I think that is true.

The CHAIRMAN. It should be the public service commission of New York.

Mr. GARNER. Or some definite power that the Secretary of War could deal with. When you say the State of New York, the Secretary of War would have to construe that as to what you meant by the State of New York, whether you meant the legislative body or the governor, or whether you meant the public service commission, or the governor alone. It seems to be it would be advisable to designate what official the Secretary of War would have to deal with.

Mr. SMITH. That would be agreeable to me. So far as those provisions are concerned—that is, giving the right to the Secretary of War to revoke permits—I believe they are proper and that they are legal, notwithstanding the contrary statement made here by the Attorney General. I was much interested in having Mr. Carmody here, because his appearance is the first time in the 20 years of discussion over Niagara power that the State of New York has shown actual official interest in the development and distribution of electrical energy at Niagara Falls. The State has been absolutely indifferent and neglectful, inefficient and incompetent in handling this whole subject; and while I have no doubt, on account of the efforts that have gone forward for the last two years, that the conservation commission at Albany may show more interest in the subject, yet I favor having the Federal Government keep complete control over the diversion of water, so that if we can not get proper action or adequate protection from the State of New York, we will have some right of appeal and a further tribunal to which we could go.

I don't know whether the attorneys for the power company will object to the provisions which I have suggested on the ground of constitutionality, but I believe that these provisions are perfectly legal and would be sustained by the courts.

Now, there are various phases of this subject which might be discussed by the committee as a whole, and I suggest an executive hearing. I do not wish to go into any part of the discussion which the committee doesn't want to hear. If any member desires information which I possess or wishes my views on any phase of the situation I shall be glad to give it now.

The CHAIRMAN. Do you want to incorporate your letters and memorandum in your remarks?

Mr. SMITH. Yes; and certain official statements of the public service commission.

The CHAIRMAN. You may have that privilege.

Mr. GARNER. In the first place, do you believe that you can divert 20,000 cubic feet on the American side without materially injuring the scenic beauty of the Falls?

Mr. SMITH. I do; and I wish to make this suggestion: That the Congress has no authority to prevent the diversion of 36,000 cubic feet on the Canadian side of the river; that this disputed 4,400 cubic feet allowed under the treaty on the American side is taken from the same pool as the 36,000 cubic feet authorized on the other side of the river, and therefore the only control this committee has in limiting and restricting the diversion relates to 4,400 cubic feet.

Mr. GARNER. You believe, then, that the authority to import power from Canada can be authorized by the Congress and that indirectly in order to promote the power on the Canadian side would not materially affect the scenic beauty?

Mr. SMITH. I believe that.

Mr. GARNER. In that connection, how long would you anticipate, from your knowledge of the conditions along the Canadian border, that it would be before the Canadian people would be using their entire power?

Mr. SMITH. I believe it would be not more than 10 years at the most, and probably nearer five years.

Mr. GARNER. And if we, by preventing the importation of it in that indirect way, try to preserve the scenic beauty of the Falls we would not accomplish that for more than five or ten years?

Mr. SMITH. That is my judgment, based on observation.

Mr. GARNER. If this power is imported, you would turn over the regulation and control of it as to prices to the State of New York?

Mr. SMITH. Yes.

Mr. GARNER. I think you have a provision that the Secretary of War might cancel these permits if, upon investigation, the powers in New York were not being exercised properly?

Mr. SMITH. That is my idea.

Mr. GARNER. You would have the same provision apply to the 20,000 cubic feet to be taken from the American side?

Mr. SMITH. Yes.

Mr. GARNER. That is to say, you would issue permits by the War Department to the State of New York, to be reissued by the State of New York to such persons and corporations or companies as would want this power, and the price to be regulated by the State of New York?

Mr. SMITH. By the State of New York.

Mr. DIFENDERFER. You would not be in favor, then, Mr. Smith, of turning over this 4,400 cubic feet to these companies that are already in control?

Mr. SMITH. That is a question, of course, that would be taken up with or by the State of New York. These companies are claiming a right to the remaining 4,400 cubic feet. That is a perfectly natural claim. But the companies believe they will get the 4,400 cubic feet because of the fact that it is not a sufficient amount, according to their view, to warrant the building of another plant. They believe that eventually it would go to them by default, because no one else would find that small amount financially profitable, unless a project similar to that which has been put before you by Mr. Bowen were consummated.

Mr. GARNER. Which would add an additional 1,600 cubic feet?

Mr. SMITH. Yes.



Mr. GARNER. In your judgment, would that materially affect the addition—1,600 feet—would that materially affect the scenic beauty, in your judgment?

Mr. SMITH. I don't believe it would. I think it would be infinitesimal, that amount of water, on Niagara Falls.

Mr. GARNER. If such a company as that were to build a plant upon the plans that have been submitted here, do you believe that the public would be the gainer by it?

Mr. SMITH. I believe the public would be gainer.

Mr. GARNER. In cheaper power?

Mr. SMITH. I believe so.

Mr. CLINE. That is, if a new independent company—

Mr. SMITH. There is practically a monopoly at Niagara Falls at the present time, and while there may be no practical or valid objection to that, providing it is adequately regulated, it has not been regulated by the public service commission. The public service commission will not initiate an investigation, and that, so far as State regulation is concerned, is the whole point in this controversy. If 100 citizens or if a city makes a complaint, the commission will take up the complaint and examine the proofs, but the commission will not go beyond that point. The result is, in so far as the city of Buffalo is concerned, the public service commission has never regulated any rate, and the rates at the present time are extortionate. I believe this is the judgment of almost everyone in the city of Buffalo. No relief has been obtained, because no verified complaint has ever been made to the public service commission.

Mr. HARRISON. Is the public service commission elected in New York?

Mr. SMITH. Appointed by the governor.

Mr. HARRISON. For how long?

Mr. SMITH. They are appointed, I believe, for a period of five years.

Mr. DEFENDERFER. In your judgment, would there be any beneficial results if this committee or a subcommittee were to visit the city of Buffalo to ascertain some of these facts?

Mr. SMITH. I do not know what it could accomplish now, in view of the hearings that have been held. If the committee had gone up there and spent two days, as we desired the members to do, perhaps they would have avoided these long hearings and have gotten more information.

The CHAIRMAN. We have given great latitude in these hearings as a matter of courtesy to get all views.

Mr. HARRISON. We certainly got a lot of information on these subjects.

Mr. GARNER. It necessarily costs something for the War Department to supervise this power importation from Canada and taking water on the American side. Is there objection for the State of New York or the parties using this power to compensate the Government for supervising their business?

Mr. SMITH. I do not know. That would be a question for the power companies. I believe that so far as the supervision of the War Department is concerned, that it does not take much time. The time heretofore taken has been due to the investigations made there

as to the amount of water that was actually being diverted. Once it was in their control, they would not have to exercise continual supervision.

Mr. GARNER. But if Congress should adopt your suggestion and reserve in the War Department the right to investigate the question of whether or not the public-service commission was giving you a reasonable rate, they would have considerable to do, I imagine, to ascertain those facts and see whether or not you were giving a reasonable rate. It might take a good deal of machinery. It seems now that it has taken \$35,000 worth of machinery to ascertain the facts in the city of Buffalo alone.

Mr. DIFENDERFER. Then they have not ascertained it?

Mr. GARNER. If the United States Government can supervise the importation of the power and have something to say about the price of it, and also supervise the taking of the water on this side, and in connection with that look into the question of reasonable rates, it seems to me that the people to get the benefit of this supervision ought to contribute to the amount of that expense.

Mr. SMITH. I do not see how it would be possible, however, to provide a means of getting that compensation.

Mr. GARNER. Well, we would put a little tariff on the power that comes in and make possibly a condition—I have not investigated the law—but we might make some condition on taking the water from the American side.

Mr. SMITH. I am in favor of placing every restriction and price limitation that the Constitution will permit.

Mr. DIFENDERFER. You are not in favor of a tariff?

Mr. SMITH. I would not be.

Mr. HARRISON. Have you got a law in the State of New York, if you know, that prevents and prohibits one competing corporation from owning stock in another competing corporation?

Mr. SMITH. I do not believe there is such a law. I never heard of it.

Mr. DIFENDERFER. There is a Federal law to that effect, is there not?

The CHAIRMAN. Judge Fennewick, do you desire to say something to the committee?

#### STATEMENT OF DANIEL J. FENNEWICK, OF BUFFALO, N. Y.

Mr. FENNEWICK. I am the local attorney for the Cataract Power Co. of Buffalo. I understood from newspaper accounts that reached Buffalo that some statements were made by counsel as to the power situation in Buffalo.

Perhaps I ought to state for the purpose of clarification that long before the Niagara Falls Power Co. erected its plant at Niagara Falls there was a lighting company in Buffalo; that it had three or four or five steam plants where it generated electricity and supplied the city of Buffalo and the inhabitants of that city with electricity. So that that company was in existence long before the Niagara Falls Power Co.

Now, when the Niagara Falls Power Co. completed its plant, the question arose as to whether the power could be successfully transmitted to Buffalo. That problem was solved, and the Niagara Falls

Power Co. decided to transmit the power to Buffalo, but before erecting its transmission lines it declined to undertake the problem of distributing power in the city of Buffalo. Of course in all of these cities you have got to have a franchise from the common council, and you have got to submit to certain regulations. It is needless to say that in the distribution of power in a large city like Buffalo, with most of the streets paved, where you are required to put a certain amount of your wires underground, that there is a large financial problem involved.

The Niagara Falls Power Co., as I understand it, was unwilling to take upon itself the entire burden of distributing the power in Buffalo, and certain gentlemen in Buffalo got together—some five or six—got a tentative contract with the power company, and then they got in engineers to see whether it would be a successful financial proposition; and the report of their engineers was adverse, and they were anxious to give up their contract with the power company. At this stage some of the men who were interested in the Buffalo General Electric Co., who did not control it, but who were stockholders in it, decided that they would take that contract off the hands of these men if they were willing to give it up. Those men gave it up, and these other men entered into the contract with the Niagara Falls Power Co., and that was the inception of the Cataract Power & Conduit Co.

I want to call your attention to the fact that five or six men—strong men—in Buffalo, after making a thorough investigation of the situation, abandoned the project and got out of their contract, fearing that it would not be successful financially.

These other men took up the proposition and put through the Cataract Power & Conduit Co.

Mr. DEFENDERFER. So successfully, Judge, that they were enabled to give half of their stock back to the Niagara Power Co.

Mr. FENNEWICK. You already have had it stated by one of the gentlemen here—I think, Mr. Barton—what the consideration was.

Now, the Cataract Power & Conduit Co. sells power to the Buffalo General Electric Co. for all lighting purposes and for power in small blocks. I think the highest they sell for power is 75 horsepower, and the Buffalo General Electric Co. abandoned its steam plants.

Now, I want to get it out of your minds at once that the Buffalo General Electric Co. is controlled either by the Cataract Power & Conduit Co. or by the Niagara Falls Power Co. I want to get it out of your minds that the Buffalo Electric Co. is controlled by any 10 men or any 20 men.

Mr. HARRISON. It is controlled by the Niagara Power Co.

Mr. FENNEWICK. Absolutely not.

Mr. HARRISON. Is not that what Mr. Barton said?

Mr. FENNEWICK. Oh, no; he said the Cataract Power Co. is controlled by the Niagara Falls Power Co., but not the Buffalo General Electric Co.

Mr. SMITH. Is there not a pretty close alliance between the Cataract Power & Lighting Co.?

Mr. FENNEWICK. What do you mean?

Mr. SMITH. Are in the same offices?

Mr. FENNEWICK. No; they are in the same building.

Mr. SMITH. Isn't one of the officers of the Cataract Co. also an officer of lighting company?

Mr. FENNEWICK. Yes; that is true.

Mr. HARRISON. What officer is that, president?

Mr. FENNEWICK. No, manager.

Mr. DIFENDERFER. He is the manager?

Mr. FENNEWICK. Yes.

Mr. DIFENDERFER. For both?

Mr. FENNEWICK. Yes, sir. In that respect, but they do not compete. What I want to say to you is that there is no control, no stock control, either by the Niagara Falls Power Co. or the Cataract Co. of the Buffalo General Electric Co., and there is no group of stockholders of those companies who control the Buffalo General Electric Co.

Mr. DIFENDERFER. Then the J. P. Morgan interests are quite evident in the Cataract Co., are they not?

Mr. FENNEWICK. I understood that they are large stockholders in the Niagara Falls Co.

Mr. DIFENDERFER. In the Cataract Co.?

Mr. FENNEWICK. No; I understand not.

Mr. HARRISON. Can you give us the names of the directors of the Buffalo Electric Co.?

Mr. FENNEWICK. I can submit them to you.

Mr. HARRISON. You can give us some of the names, I suppose?

Mr. FENNEWICK. Yes, sir.

Mr. HARRISON. That you remember?

Mr. FENNEWICK. William C. Warren, Charles R. Huntley, Walter C. Cook, Mr. Barrick, Mr. Andrew Langdon.

I can not name them all.

Mr. HARRISON. You have not named any of the directors in the Niagara Falls Co. that are directors in the Electric Co.?

Mr. FENNEWICK. I do not believe there are any. Henry W. Burt is another, and Pomeroy is a director of the Niagara Falls Power Co.

Mr. HARRISON. What?

Mr. FENNEWICK. He is the only one director of the Buffalo General Electric Co.

Mr. DIFENDERFER. Are any of those men you named interested in the Cataract Co.?

Mr. FENNEWICK. I think Mr. Huntley is interested in the Cataract Co., but I think that is all.

Mr. HARRISON. The general manager is interested in both?

Mr. FENNEWICK. Yes, sir.

Mr. HARRISON. Who is that, Mr. Huntley?

Mr. FENNEWICK. That is Mr. Huntley.

Mr. GARNER. As I understand it, when the Niagara Falls Power Co. decided to build up to Buffalo, they went up to the city line?

Mr. FENNEWICK. Yes, sir.

Mr. GARNER. They were a local company doing business in Buffalo, and generating electricity by steam?

Mr. FENNEWICK. One company, the Buffalo General Electric Co.

Mr. GARNER. The Niagara Co., as it were, said: "Gentlemen, we are up here with some cheap power. We come up here to furnish these people with electricity. Now if you give us the controlling stock in your company we will sell power to the company and let you continue business; otherwise we will come in and compete with you."

Mr. FENNEWICK. That was not quite the situation.

Mr. GARNER. It appears that way to me. At least I simply give you my idea that the Niagara Falls Power Co. said, "We have got some cheaper power, and we will sell it to you on satisfactory terms; otherwise we propose to come in——"

Mr. FENNEWICK. They could not come in without getting a franchise from the city. They had to get a franchise that would permit them to come into Buffalo.

Mr. GARNER. I understand, but is it not to be presumed that the city of Buffalo would let a company come in with cheaper power?

Mr. FENNEWICK. Making that assumption; yes.

Mr. GARNER. I do not assume that the city of Buffalo would refuse their people cheaper power.

Mr. FENNEWICK. You are also assuming that the Niagara Falls Power Co. wanted to undertake the distribution of power in Buffalo, which they did not.

Mr. GARNER. I will assume, then, that they did not want to distribute their power in the city of Buffalo.

Mr. FENNEWICK. That is, they did not want to undertake the financial responsibility involved.

Mr. GARNER. But they did make such an arrangement after they got control of the stock of the company that did distribute, and therefore do distribute in the city of Buffalo.

Mr. FENNEWICK. They assumed the responsibility of getting up to the city line, but said to the other gentlemen: "The question of distribution is for you to determine yourselves whether under a franchise it would be a paying business."

Mr. GARNER. They succeeded in convincing the gentlemen who were then distributing electricity in the city of Buffalo to the extent of getting a contract granted with them and a controlling interest in their company.

Mr. FENNEWICK. Hardly granted. They gave them a very good contract, a very favorable contract.

Mr. GARNER. It appears to me like a great big fellow walking up to the city of Buffalo and saying, "Gentlemen, you are at my mercy."

Mr. FENNEWICK. I think when you begin to talk about three profits here, there are no three profits in the business. Let us assume that the Niagara Falls Power Co. are in the business of distributing power and light in the city of Buffalo; would not it have to have the same plant as the Cataract Co. has and the Buffalo General Electric Co. have now?

It would have to have practically the same investment, and certainly when you talk about three profits there are no three profits.

Mr. GARNER. I agree with that; if I had been a stockholder in the city of Buffalo at the time this power came through the gates, I would have made the best terms possible. I am not criticizing the Niagara Falls Power Co., but I am saying that the situation was such that the Niagara Falls Power Co. was able to make its own terms with the company that could not compete with them in the matter of cheap power.

Mr. FENNEWICK. I can not quarrel with your deductions, of course. I want to go a little bit further in reference to extortionate rates. I think it is safe to say that there is no large city in the United States that gets its electric lighting as cheap as the city of Buffalo, and I want Congressman Smith to name me some large city that does.

Mr. CURLEY. The Edison Co. deliver a power in Boston, have reduced their kilowatt from 18 cents per kilowatt to a recent reduction put in operation last week of 10 cents—a total reduction of 80 per cent. What reduction has been made in the last five years by the operating companies in Buffalo?

Mr. FENNEWICK. I think I can say to you that our highest maximum rate is 9 cents for lighting, and I believe that the statistics of our company will show that the average rate we get on all of our distribution of power, as well of day power as of night power, is somewhere between 2 and 3 cents a kilowatt-hour.

Mr. CURLEY. That maximum rate—has that been reduced at any time in the last five years?

Mr. FENNEWICK. I can not say, but that only applies to very small installations of light. I know it has been reduced, as far as the municipality is concerned, to 6 cents.

Mr. CURLEY. What did the municipality pay previous to that?

Mr. FENNEWICK. Nine cents on small installations. The municipality pays for the power it gets at the pumping station \$25 a horsepower.

Now, I want to say further to you gentlemen, a good deal has been said about the lack of power and the unwillingness of the public-service commission. We have got a public-service commission in the second district in the State of New York that I believe is as high class a commission as was ever appointed by Governor, now Justice, Hughes. The man at the head of it was appointed chairman by Mr. Hughes, and he is still chairman, and it is a high-class commission. Now, we have had that commission in this district since 1907. At any time if the cost of electrical power was such a great burden as it has been represented here, do not you think that 100 users of power, or 100 users of light, would have taken advantage of the law and made a complaint?

Now, they did not do it, although the subject has been advertised by such gentlemen as Mr. Ferguson, who is the writer of one of the letters read by Mr. Smith, who is a lawyer, and who has a lawsuit pending against the Cataract Power & Conduit Co., and that possibly may explain his interest in the situation. Here we have had this commission in force since 1907, and with all this talk of extortionate prices we have not had 100 consumers who would back up the movement.

Mr. CLINE. There must be some friction there or there would not have been \$35,000 set aside at Buffalo to investigate that?

Mr. FENNEWICK. You know, Congressman, that undoubtedly you will have complaints, and we are perfectly willing to have those complaints investigated. That is matter that is made a political issue.

Mr. CLINE. Under your theory, if 100 men had made a petition it would not have been necessary to set aside \$35,000 to get a hearing, would it, unless the people of Buffalo had judged it to be an aggravated case?

Mr. FENNEWICK. It was made a sort of a political issue by the candidates a couple of years ago, and now, to carry out that pledge made in the campaign, the complaint is at the present time made by the mayor. The complaint can either be presented by 100 consumers or by the mayor.

Mr. DIFENDERFER. Is it not a fact that over 100, in the neighborhood of 150, names have been placed on the petition protesting against these high prices?

Mr. FENNEWICK. Since the complaint was made by the municipality, within about fifteen days a gentlemen who has been very active in the matter has succeeded in getting 100 names as to the lighting company and three names as to the power company.

It is not necessary to spend \$30,000 or \$85,000 for this investigation. Not at all. But the corporation counsel thinks it is and has got that money at his command to spend.

Counsel submits that no investigations of rate of any of the public utilities have been undertaken by the public service commission. That is not true. We have just finished an investigation of the Buffalo Gas Co. that has extended over a year.

Mr. DIFENDERFER. Has that any connection with the electric company?

Mr. FENNEWICK. None at all; but I simply want to indicate that it shows that the public service commission is active when it is called upon to exercise its power.

Mr. DIFENDERFER. In some particulars.

Mr. FENNEWICK. In all particulars.

If you can indicate to me one instance I will be glad to answer you if I can.

Mr. DIFENDERFER. It is quite evident that they have not interfered with the electrical power up to this time. I think Mr. Smith is quite right in his statement that he made here.

Mr. FENNEWICK. In what way? We have been before them often enough, not on the question of rates, because that question has not been complained of; no one has complained.

Mr. HARRISON. It was so important that it was made a political issue.

Mr. FENNEWICK. You know how easy such a political issue can be created.

Mr. HARRISON. May I ask you one question. Who won?

Mr. FENNEWICK. The Democrats.

Mr. DIFENDERFER. Then it is a popular issue.

Mr. SMITH. Gen. Greene says that they are selling the power at Lockport at \$18, and your company sells it in Buffalo at \$25.

Mr. DIFENDERFER. And there is only 6 miles difference in the distance to carry.

Mr. FENNEWICK. Now, if you gentlemen will consider the difference in size of Lockport and Buffalo and the difference in cost of distributing power in Buffalo.

Mr. SMITH. It is not distributed.

Mr. FENNEWICK. We have got to distribute. We have got to distribute it and they take it from the city line and bring down the voltage.

Do you know, gentlemen, it costs you from \$12,000 to \$15,000 a mile to put the wires underground? There is an ordinance—

Mr. CLINE. According to the testimony produced here the transmitting company gets in the neighborhood of \$7 to \$7.60 for transmitting the power, an amount equal to the cost of producing the power by the company they receive it from.

Mr. FENNEWICK. I understood Mr. Barton to say that the cost of producing was \$12, and not \$9.40, on the Canadian side.

It costs us from \$12,000 to \$15,000 a mile to put the wires underground in the city of Buffalo.

An ordinance was enacted back in 1906 or 1907 under which we are required in the first year to put down  $3\frac{1}{2}$  miles, and the next year  $3\frac{1}{2}$  miles, and the next year 3 miles; and every year thereafter, continuing on indefinitely, we are required to put down 2 miles. Now, we have not any such ordinance down through Lockport or in these small cities, and you gentlemen ought to have the proper conception of the cost of distribution of power when you get in a large city.

Mr. HARRISON. You represent the General Electric Co.

Mr. FENNEWICK. Yes, sir; I am the local attorney for both companies.

I do not know that I have anything more to say, gentlemen.

The CHAIRMAN. Maj. W. B. La Due, of the War Department.

Mr. FENNEWICK. Might I be permitted to file here copies of some of the certificates made by our users of power in Buffalo indicating their satisfaction with the general service?

The CHAIRMAN. Is it very voluminous? I think it would be advisable to give each member of the committee a copy.

#### STATEMENT OF MAJ. LA DUE.

Maj. LA DUE. I have nothing further to say, except that I have here a statement that I secured in response to an implied request of some of the representatives of the power companies, showing the diversions during the month of December, which I will append to my hearing. It shows that during the month of December the average total diversions by the two companies on this side was 13,785 feet. The maximum diversion, however, was up to the full limit of the permits. The diversion on the Canadian side, the average during December, was 12,560, the maximum being 16,400. The total diversion on both sides of the river was an average for the month of 26,345 and a maximum of 31,630. This information may be of value, and I will append it to my hearing. I will also append copies of the permits now in force. I have them here if the members would like to see them. I will also append two short statements prepared in the Office of the Chief of Engineers.



TABLE A.—Statement showing estimated diversions of all companies and importation of power into the United States from Canadian companies, vicinity of Niagara Falls, N. Y., for month of December, 1911.

[Furnished by the lake survey office, Detroit, Mich.]

	Diversions (cubic feet per second).		Importation of power (horsepower).	
	Average.	Maximum.	Average.	Maximum.
Niagara Falls Hydraulic Power & Manufacturing Co. (Hydraulic Power Co.).....	6,135	6,639		
Niagara Falls Power Co.....	7,650	8,600		
Ontario Power Co.....	4,890	5,750		
Electrical Development Co.....	3,660	5,000		
Canadian Niagara Power Co.....	4,300	5,650		
International R. R. Co.....	110			
Niagara, Lockport & Ontario Power Co.....			38,700	87,000
Niagara Falls Power Co.....			46,600	57,500
Total.....	26,345	31,630	85,200	114,900

<sup>1</sup> The permit issued to the Niagara Falls Power Co. by the Secretary of War specified 52,500 electrical horsepower as the maximum load that can be brought into the United States, with the provision that "Peaks of load curves due to overlapping loads will not be considered as violations of the permit, provided the duration of any one such peak, measured on the 52,500 horsepower line, does not exceed one hour, and provided that the total duration of such peaks in 24 hours, measured in the same manner, does not exceed two hours."

NOTES.—The diversions of the Canadian companies are determined by applying the efficiencies of these plants, as stated in report of Sept. 30, 1911, to the output of power as determined by the inspections of the companies' records.

The Lockport Hydraulic Co. (Hydraulic Race Co.) has been shut down since the close of navigation owing to the reconstruction of canal in that vicinity.

The maximum diversion indicated above for the Niagara Falls Hydraulic Power & Manufacturing Co. is determined by applying the coefficient of relation between diversion and output, as determined by the discharge observations of December last, to the maximum output of the plant in December. This apparent violation of this company's permit occurred after discharge measurements were made and before reductions of the notes had been completed and limitations of output prescribed. Further investigation of this matter is being made preparatory to submitting a special report.

The amount of power imported is determined by direct inspection of graphic records of the transmission companies for December last.

#### STATEMENT AS TO THE EFFECT ON LAKE ERIE COMMERCE OF A PERMANENT LOWERING OF ONE INCH IN THE WATER SURFACE OF LAKE ERIE.

In view of the general interest in the very important question of the water levels of the Great Lakes, referred to incidentally at the public hearings relative to the Niagara Falls diversion, it is deemed pertinent to invite attention of the committee to the statement of Brig. Gen. William L. Marshall, Chief of Engineers, in transmitting to the Secretary of War Maj. Keller's report of November 30, 1908 (p. 8, S. Doc. No. 105, 62d Cong., 1st sess.), to the following effect:

"As each inch of draft for the modern lake freighter is the equivalent of from 80 to 100 tons of profitable cargo, the aggregate loss per season for the entire fleet using Lake Erie ports as terminals becomes a very large amount."

Maj. Keller in his report (p. 15, S. Doc. No. 105, 62d Cong., 1st sess.), said:

"The earning capacity of each freighter will be reduced to the extent of \$75 to \$100 per trip. During an average season the loss for each vessel would total \$2,500 to \$3,000."

The total commerce using Lake Erie ports may be stated as approximately 63,000,000 tons per annum, of which from 30,000,000 to 40,000,000 tons is now carried in vessels of 10,000 tons burden or over, which may be affected in any lowering of the water surface. Based upon the above figures, and assuming that cargo is available in quantity to permit the loading of each vessel on each trip, to the maximum draft permitted by the controlling depths of Lake Erie ports, the total potential loss to Lake Erie commerce due to a permanent lowering of 1 inch in the water surface may be taken at from \$250,000 to \$350,000 per annum; and this potential figure will increase with the anti-

pated natural increase in the number and size of the larger vessels, and in the total commerce of the lake. When the time comes that a matter of inches becomes a question of immediate importance to Lake Erie commerce, any lowering of that lake due to the Niagara diversions (which affect only Lake Erie and upper Niagara River) can be readily controlled by proper regulation works in Niagara River; although such slight effect and ready control will not be true of the Chicago diversion which is several times greater in amount, and must affect all four lower lakes and the St. Lawrence River, to a serious extent, unless controlled at several places by regulation works of great final cost in time and money.

STATEMENT AS TO THE USE OF WATER DIVERTED FROM THE ERIE CANAL BY THE  
HYDRAULIC RACE CO. (SUCCESSORS OF THE LOCKPORT HYDRAULIC CO.)

Upon the request of the Hydraulic Race Co. of Lockport, N. Y., there is transmitted herewith for the information of the committee a copy of a letter from the Hydraulic Race Co., dated January 20, 1912, in regard to the use of the water diverted by that company from the Erie Canal for power purposes, under their permit to divert 500 cubic feet per second, granted by the Secretary of War under date of August 16, 1907. While this office has not been able, in the time available since receipt of this letter, to verify the figures stated therein, it is within the knowledge of this office that the general statements made are substantially correct; and in view of the prominence given at the public hearings to the principle that all water diverted at Niagara Falls should be used in such manner as to utilize the maximum possible head, it is deemed to be but fair and just to the Hydraulic Race Co. to place before the committee this statement, showing that while the Hydraulic Race Co. at its own plant uses but a 50-foot head (approximately the fall between the two levels of the Erie Canal at Lockport) the water diverted by them under their permit again passes out of the canal below the locks and is used over and over again by other power users between the Erie Canal and Lake Ontario, so that the total head finally utilized is a very large percentage of the total head available. This successive use of the water is distinctly provided for by the terms of the permit issued by the Secretary of War to the Hydraulic Race Co., as will be seen by reference to that document.

HYDRAULIC RACE Co.,  
Lockport, N. Y., January 20, 1912.

Gen. W. H. BIXBY,  
Chief of Engineers, United States Army,  
Washington, D. C.

DEAR SIR: We have before us copy of document No. 246 entitled "Preservation of Niagara Falls." On page 16 of this document is a table which indicates that the Lockport Hydraulic Co. is using but 11 per cent of the efficiency of a 220-foot fall, which will, we fear, lead many into a belief that the water granted (500 cubic feet) under the permit is a less economical development than any of the others, when, as a matter of fact, the water is used under a much greater head than any other water diverted from Niagara River.

In explanation, we add that reference to the permit of August 16, 1907, will show that it specifically provided for the use of the water by factories on Eighteenmile Creek, Medina, Albion, and other places after its passage through the development of the hydraulic company. It may fairly be said that no other Niagara River water performs a greater use in promoting the interests of the small consumer and individual manufacturer than that granted to the Lockport Hydraulic Co., nor is any more fully used.

We have taken the water practically at Lake Erie level (the level above the locks being usually between 569 and 570), and of the total fall of about 320 feet from this point to Lake Ontario over 280 feet is available, and, in the end, improved operating conditions and changes will result in utilization of even more.

We give the following heads as approximately correct for the various sites beginning at Lockport and extending down Eighteenmile Creek to Olcott:

	Feet.
Hydraulic Race Co. (Lockport Hydraulic Co.).....	50
United Boxboard Co. (first plant).....	82.5
United Boxboard Co. (second plant).....	14
Lockport Paper Co.....	9
Niagara Paper Mills.....	9.5
Westerman & Co.....	21
United Indurated Fiber Co.....	29
Electric Smelting Co.....	35.5
Newfane Electric Co.....	7
Newfane Basket Co.....	14
Lockport Felt Co.....	9
Western New York Water Co.....	50
Total.....	280.5

All the plants of Eighteenmile Creek are practically entirely dependent for their operation on the permit of August, 1907, for their water power.

Our company's head will be lessened somewhat under new conditions of the barge canal, and one or two of the falls are not utilized at date, notably that of the western New York Water Co.

All these powers and their operation have been very much disturbed by the building of the new barge canal, but should be greatly improved in the future with more stable conditions, and it is possible that almost the entire fall to Lake Ontario will be utilized, and the total should certainly reach 300 feet, which compares more than favorably with the 220 feet available at Niagara Falls.

While we are not familiar with present conditions at the plants now operating on Eighteenmile Creek, it is fair to state that the head actually in use now is approximately 220 feet, so that the efficiency of this development on this basis should, we believe, be higher than any of the others, and the power even now amounts to several thousand horsepower.

We would appreciate it if the report may be amended in these particulars lest some injury be done the various interests which have for so many years and before the passage of the Burton Act had the use of this water and upon which water their success now so largely depends.

We are sending this to you rather hastily, as we believe that there is to be a meeting on this whole question on Tuesday next, January 23, and you may wish to have this data before you and the others at that time.

We would appreciate your advices and trust the data may be of service.

Respectfully submitted.

HYDRAULIC RACE CO.,  
By L. H. KUNHARDT,  
*Treasurer and Engineer.*

#### PERMIT TO LOCKPORT HYDRAULIC CO. FOR DIVERSION OF WATER AT LOCKPORT, N. Y.

Whereas by section 2 of an act of Congress approved June 29, 1906, entitled "An act for the control and regulation of the waters of Niagara River, for the preservation of Niagara Falls, and for other purposes" (84 Stat. L., 626), it is provided that the Secretary of War is authorized to grant permits for the diversion of water in the United States from the Niagara River or its tributaries, for the creation of power, to individuals, companies, or corporations, which are now actually producing power from the waters of said river, or its tributaries in the State of New York, or from the Erie Canal; to an amount not exceeding in the maximum 8,600 cubic feet per second to any one individual, company, or corporation and not exceeding an aggregate amount of 15,600 cubic feet per second; and

Whereas waters are being diverted from the Erie Canal for the creation of power by the Lockport Hydraulic Co., a corporation organized under the laws of the State of New York, at Lockport, N. Y., by the abstraction of approximately 1,000 cubic feet of water per second from above the locks at said place,

which water is returned to the Erie Canal below the locks, of which total quantity 500 cubic feet is required for navigation purposes and the remaining 500 cubic feet is not required for navigation purposes; and

Whereas the said waters not required for navigation purposes, after being returned to the canal below the locks, are again diverted from the canal and are used for power purposes by various persons and corporations located upon Eighteenmile Creek, at and below Lockport, and at Middleport, at Medina, at Eagle Harbor, at Albion, at Holley, and at other places, and are not returned to the canal; many of the persons or corporations on Eighteenmile Creek using the same water in succession, one after the other; and

Whereas application has been made to the Secretary of War by the Lockport Hydraulic Co. for permission to divert 500 cubic feet per second from the Erie Canal at Lockport above the locks, and application has been made by various persons and corporations to divert various amounts from the Erie Canal below the locks; and

Whereas the diversion of water from the Erie Canal below the locks is not properly the diversion of water from the Niagara River or its tributaries, since said water diverted below the locks has already been diverted from above the locks and has been used for power purposes:

Now, therefore, this is to certify that the Secretary of War hereby grants permission to the Lockport Hydraulic Co., said applicant, to divert waters of the Niagara River and its tributaries from the Erie Canal, at Lockport, N. Y., above the locks, for power purposes, not exceeding 500 cubic feet per second, it being distinctly understood that the waters so diverted shall be returned to the canal below the locks, and that this permit shall inure to the benefit of all persons and corporations now using said water for power purposes, whether lessees of the applicant or having the right to be furnished by it with water, and including the persons and corporations now diverting water as aforesaid from the Erie Canal at Eighteenmile Creek, Middleport, Medina, Eagle Harbor, Albion, Holley, and other places on the lower level.

This permit is granted upon condition and with the understanding that it does not confer upon the applicant, or said other persons or corporations, any authority whatever to divert water from the Erie Canal without the consent of the State of New York, and that this permit is subject to any and all regulations which may be imposed upon the diversion of water from said canal by said State; and, further, that this permit is made subject to the jurisdiction of said State to alter, improve, or abolish the said canal and to prevent the diversion of any water whatever therefrom, and this permit shall not be taken to impose any obligation whatever upon the said State or the authorities thereof. It is intended to confer only so far as the Federal Government is concerned, and the Secretary of War is authorized, the right to take the water and to claim immunity from any prosecution or legal obligation under the first section of the act approved June 29, 1906, above mentioned.

Witness my hand this 16th day of August, 1907.

WM. H. TAFT, *Secretary of War.*

Extended September 2, 1911, to March 1, 1912.

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PERMIT TO NIAGARA FALLS HYDRAULIC POWER & MANUFACTURING CO. FOR THE DIVERSION OF WATER FROM THE NIAGARA RIVER FOR POWER PURPOSES.

Whereas under the provisions of an act of Congress approved June 29, 1906, entitled "An act for the control and regulation of the Niagara River for the preservation of Niagara Falls and other purposes," it is provided that the Secretary of War may grant permits for the diversion of water in the United States from said Niagara River or its tributaries for the creation of power, and that it shall not be lawful to divert water from said river for power purposes except in accordance with permits so issued by the Secretary of War; and

Whereas upon the applications, hearings, reports, and all the proceedings by applicants for permits under the provisions of the said act the Secretary of War, under date of January 18, 1907, filed a written opinion directing, among other things, that a permit be issued to the Niagara Falls Hydraulic Power & Manufacturing Co. for the diversion of 6,500 cubic feet per second;

Now, therefore, this is to certify that the Secretary of War hereby gives permission to the Niagara Falls Hydraulic Power & Manufacturing Co. to

divert 6,500 cubic feet of water per second from the Niagara River upon the following terms and conditions:

First. The amount above named, 6,500 cubic feet per second, represents the maximum quantity of water that can be diverted at any time under the terms of this permit.

Second. The grantee shall make, under the supervision of an authorized inspector of the United States, measurements in its intake canals of such a character and at such times as may be deemed necessary to show the amount of water diverted.

Third. The grantee shall keep such records as will show at any time the combined continuous output of its power stations and of the power stations of its customers to whom water power or mechanical horsepower is furnished.

Fourth. The power stations of the grantee and of its customers, to whom water power or mechanical horsepower is furnished, together with their operating records, shall be subject to inspection at all times by authorized inspectors of the United States.

Fifth. This permit is issued without any determination of priority of right to divert water from the Niagara River between the parties to whom permits for diversion may be issued.

Sixth. The grantee shall carry out in good faith the obligations which it assumed in its letters to the War Department, or to the representative of that Department, concerning the improvement of the scenic conditions on the American side of the gorge below the Upper Arch Bridge.

Seventh. The Secretary of War reserves the right at any time to modify the form of this permit, to change the method or plan of measurement herein prescribed, or to substitute other methods of measurement whenever, in his judgment, such modifications, changes, or substitutions are necessary to carry out the provisions of the act of June 29, 1906, under which this permit is issued.

Witness my hand this 16th day of August, 1907.

WM. H. TAFT, *Secretary of War.*

Extended September 2, 1911, to March 1, 1912.

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*Permit to Niagara Falls Power Co. for the diversion of water from the Niagara River for power purposes.*

Whereas, under the provisions of an act of Congress, approved June 29, 1906, entitled "An act for the control and regulation of the Niagara River for the preservation of Niagara Falls, and other purposes," it is provided that the Secretary of War may grant permits for the diversion of water in the United States from said Niagara River or its tributaries for the creation of power, and that it shall not be lawful to divert water from said river, for power purposes, except in accordance with permits so issued by the Secretary of War; and

Whereas, upon the applications, hearings, reports, and all the proceedings by applicants for permits under the provisions of the said act, the Secretary of War, under date of January 18, 1907, filed a written opinion, directing, among other things, that a permit be issued to the Niagara Falls Power Co. for the diversion of 8,600 cubic feet per second:

Now, therefore, this is to certify that the Secretary of War hereby gives permission to the Niagara Falls Power Co. to divert 8,600 cubic feet of water per second from the Niagara River, upon the following terms and conditions:

First. The amount above named, 8,600 cubic feet per second, represents the maximum quantity of water that can be diverted at any time under the terms of this permit.

Second. The grantee shall make, under the supervision of an authorized inspector of the United States, measurements in its intake canals of such a character and at such times as may be deemed necessary to show the amount of water diverted.

Third. The grantee shall keep such records as will show at any time the combined continuous output of its power stations and of the power stations of its customers to whom water power or mechanical horsepower is furnished.

Fourth. The power stations of the grantee, and of its customers, to whom water power or mechanical horsepower is furnished, together with their oper-

ating records, shall be subject to inspection at all times by authorized inspectors of the United States.

Fifth. This permit is issued without any determination of priority of right to divert water from the Niagara River between the parties to whom such permits, for diversion, may be issued.

Sixth. The Secretary of War reserves the right at any time to modify the form of this permit, to change the method or plan of measurement herein prescribed, or to substitute other methods of measurement, whenever, in his judgment, such modifications, changes, or substitutions are necessary to carry out the provisions of the act of June 29, 1906, under which this permit is issued.

Witness my hand this sixteenth day of August, 1907.

WM. H. TAFT, *Secretary of War.*

Extended September 2, 1911, to March 1, 1912.

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PERMIT FOR THE TRANSMISSION OF ELECTRICAL POWER FROM CANADA INTO THE UNITED STATES.

Whereas under the provisions of an act of Congress, approved June 29, 1906, entitled "An act for the control and regulation of the Niagara River, for the preservation of Niagara Falls, and other purposes," it is provided that the Secretary of War may grant permits for the transmission of power from the Dominion of Canada into the United States, and that it shall not be lawful to transmit electrical power into the United States from Canada except in accordance with the permits so issued by the Secretary of War; and

Whereas upon all the proceedings taken in respect of permits under the said act, the Secretary of War, under date of January 18, 1907, filed a written opinion, directing, among other things, that a permit issue to the Niagara Falls Electrical Transmission Co. for the transmission of 46,000 electrical horsepower from the Dominion of Canada into the United States; and

Whereas the said Niagara Falls Electrical Transmission Co. has made a supplemental petition that such permit provide that a part of such electrical power may be delivered to the Cataract Power & Conduit Co. (a New York State corporation for use in the United States after transformation by step-up transformers of the Canadian Niagara Power Co. at Niagara Falls, Canada, and transmission to point in the international boundary between Fort Erie, Canada, and Buffalo, N. Y., over the power transmission lines of the Canadian Niagara Power Co.

Now, therefore, this is to certify that hereby the Secretary of War gives permission to the said Cataract Power & Conduit Co. and to the Niagara Falls Electrical Transmission Co., and to such other distributing agents or companies in the United States as The Electrical Development Co. of Ontario (Ltd.) may designate to receive from the said The Electrical Development Co. of Ontario (Ltd.) at the international boundary line and to transmit into the United States 46,000 electrical horsepower upon the following terms and conditions:

First. A part of such electrical power may be received by the said Cataract Power & Conduit Co. at the international boundary over the power transmission lines of the Canadian Niagara Power Co. The remaining part of such electrical power may be transmitted into the United States over transmission circuits hereafter to be approved by the Chief of Engineers, and may be received by the said Niagara Falls Electrical Transmission Co., or by such other distributing agents or companies in the United States as the said The Electrical Development Co. of Ontario (Ltd.) may designate.

Second. So long as the said Cataract Power & Conduit Co. and the said Niagara Falls Electrical Transmission Co. shall procure from the Electrical Development Co. of Ontario (Ltd.) the right for the Chief of Engineers, or his representatives to enter upon the premises of the Electrical Development Co. of Ontario (Ltd.) and to inspect and verify their records to the satisfaction of the Chief of Engineers, and so long as the amount of power transmitted to the United States does not exceed 75 per cent of the amount herein authorized, the measurements necessary to insure compliance with the terms of this permit shall be made at the expense of the grantee at the station of the Electrical Development Co. of Ontario (Ltd.), due allowance being made for losses between the measuring station and the international boundary line.

Third. When the amount of power transmitted to the United States under the terms of this permit exceeds 75 per cent of the authorized amount, or if right of access or examination to the satisfaction of the Chief of Engineers is declined or refused at any time by the Electrical Development Co. of Ontario (Ltd.), the measurements necessary to insure compliance with the terms of this permit shall be made at suitable points in the United States near the international boundary.

Fourth. When under either of the conditions named in the paragraph immediately preceding the power imported is measured at points in the United States, such measurements shall be made by continuous record indicating watt meters of approved design, to be furnished, installed, and maintained by the grantee; continuous records shall be taken on each independent circuit entering the United States; the meters shall be kept in efficient condition, and the records shall be subject to inspection at any time by authorized inspectors of the United States.

Fifth. Except as noted below, 46,000 electrical horsepower represents the aggregate maximum loads that can be brought into the United States at any time under the terms of this permit:

(a) Momentary indications in excess of the authorized amount, due to short circuits, grounds, etc., will not be considered as violations of the permit.

(b) Peaks of load curves due to overlapping loads will not be considered as violations of the permit provided the duration of any one such peak, measured on the 46,000 horsepower line, does not exceed one hour, and provided that the total duration of such peaks in 24 hours, measured in the same manner, does not exceed two hours.

Sixth. Maps or charts, verified to the satisfaction of the Chief of Engineers, shall be filed with the Chief of Engineers, showing the exact location of all lines or circuits over which power is transmitted into the United States under the provisions of this permit; and no change shall be made in such lines or circuits without submitting at the same time to the Chief of Engineers, or his representative, a map or chart showing such change.

Seventh. One of the objects of the law being the preservation of the natural scenic conditions of the Falls and the gorge, it is stipulated that the plans for carrying the power across the international boundary be submitted to the Secretary of War for approval before work is undertaken. For the same reason, it is further stipulated that no steps be taken by the grantee, or its allied interests, as disclosed in its application for a permit toward the construction of another bridge across the Niagara River.

Eighth. The Secretary of War reserves the right at any time to modify the form of this permit, to change the method or plan of measurement herein prescribed, or to substitute other methods of measurement whenever, in his judgment, such modifications, changes, or substitutions are necessary to carry out the provisions of the act of June 29, 1906, under which this permit is issued.

Witness my hand this 17th day of August, 1907.

WM. H. TART, *Secretary of War.*

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PERMIT TO NIAGARA FALLS POWER CO. FOR THE TRANSMISSION OF ELECTRICAL POWER FROM CANADA INTO THE UNITED STATES.

Whereas under the provisions of an act of Congress, approved June 29, 1906, entitled "An act for the control and regulation of the Niagara River for the preservation of Niagara Falls, and for other purposes," it is provided that the Secretary of War may grant permits for the transmission of power from the Dominion of Canada into the United States, and that it shall not be lawful to transmit electrical power into the United States from Canada except in accordance with the permits so issued by the Secretary of War;

Whereas upon the applications, hearings, reports, and all the proceedings by the applicants for permits under the provisions of the said act, the Secretary of War, under date of January 18, 1907, filed a written opinion directing, among other things, that a permit be issued to the Niagara Falls Power Co. for the transmission of 52,500 electrical horsepower from the Dominion of Canada into the United States;

Now, therefore, this is to certify that the Secretary of War hereby gives permission to the Niagara Falls Power Co. to receive from the Canadian

Niagara Power Co., at the international boundary line, and to transmit from the Dominion of Canada into the United States, 52,500 electrical horsepower, upon the following terms and conditions:

First. Such electrical power may be received in the United States in the first instance by the Niagara Falls Power Co. or by its distributing agents or others with whom it or the Canadian Niagara Power Co. has or hereafter may have contracts for power delivery in the United States.

Second. Measurements of the amount of power transmitted into the United States under the terms of this permit shall be made at suitable points in the United States near the international boundary by continuous record-indicating wattmeters of approved design, to be furnished, installed, and maintained by the grantee; continuous records shall be taken on each independent circuit entering the United States; the meters shall be kept in efficient condition, and the records shall be subject to inspection at any time by authorized inspectors of the United States.

Third. Except as noted below, 52,500 electrical horsepower represents the maximum load that can be brought into the United States at any time under the terms of this permit:

(a) Momentary indications in excess of the authorized amount, due to short circuits, grounds, etc., will not be considered as violations of the permit.

(b) Peaks of load curves, due to overlapping loads, will not be considered as violations of the permit, provided the duration of any one such peak, measured on the 52,500-horsepower line, does not exceed one hour, and provided that the total duration of such peaks in twenty-four hours, measured in the same manner, does not exceed two hours.

Fourth. Maps or charts, verified to the satisfaction of the Chief of Engineers, shall be filed with the Chief of Engineers, showing the exact location of all lines or circuits over which power is transmitted into the United States under the provisions of this permit, and no change shall be made in such lines or circuits without submitting at the same time to the Chief of Engineers or his representative a map or chart showing such change.

Fifth. The Secretary of War reserves the right at any time to modify the form of this permit, to change the method or plan of measurement herein prescribed, or to substitute other methods of measurement whenever, in his judgment, such modifications, changes, or substitutions are necessary to carry out the provisions of the act of June 29, 1906, under which this permit is issued.

Witness my hand this 16th day of August, 1907.

WM. H. TAFT, *Secretary of War.*

Extended September 2, 1911, to March 1, 1912.

*Permit to Niagara, Lockport & Ontario Power Co. for the transmission of electrical power from Canada into the United States.*

Whereas under the provisions of an act of Congress approved June 29, 1906, entitled "An act for the control and regulation of the Niagara River, for the preservation of Niagara Falls, and other purposes," it is provided that the Secretary of War may grant permits for the transmission of power from the Dominion of Canada into the United States and that it shall be not lawful to transmit electrical power into the United States from Canada except in accordance with the permits so issued by the Secretary of War.

Whereas upon the applications, hearings, reports, and all the proceedings by applicants for permits, under the provisions of the said act, the Secretary of War, under date of January 18, 1907, filed a written opinion directing, among other things, that a permit be issued to the Niagara, Lockport & Ontario Power Co. for the transmission of 60,000 electrical horsepower from the Dominion of Canada into the United States.

Now, therefore, this is to certify that the Secretary of War hereby gives permission to the Niagara, Lockport & Ontario Power Co. to receive from the Ontario Power Co. of Niagara Falls, at the international boundary line, and to transmit into the United States, 60,000 electrical horsepower upon the following terms and conditions:

First. So long as the Niagara, Lockport & Ontario Power Co. shall procure from the Ontario Power Co. of Niagara Falls the right for the Chief of Engineers, or his representative, to enter upon the premises of the Ontario Power Co. of Niagara Falls and to inspect and verify their records to the satisfaction



of the Chief of Engineers, and so long as the amount of power transmitted to the United States does not exceed 75 per cent of the amount herein authorized, the measurements necessary to insure compliance with the terms of this permit shall be made at the expense of the grantee at the station of the Ontario Power Co. of Niagara Falls, due allowance being made for losses between the measuring station and the international boundary line.

Second. When the amount of power transmitted to the United States under the terms of this permit exceeds 75 per cent of the authorized amount, or if the right of access or examination to the satisfaction of the Chief of Engineers is declined or refused at any time by the Ontario Power Co., the measurements necessary to insure compliance with the terms of this permit shall be made at suitable points in the United States near the international boundary.

Third. When under either of the conditions above named the power imported is measured at the points in the United States, such measurements shall be made by continuous record indicating wattmeters of approved design, to be furnished, installed, and maintained by the grantee; continuous records shall be taken on each independent circuit entering the United States; the meters shall be kept in efficient condition, and the records shall be subject to inspection at any time by authorized inspectors of the United States.

Fourth. Except as noted below, 60,000 electrical horsepower represents the maximum load that can be brought into the United States at any time under the terms of this permit.

(a) Momentary indications in excess of the authorized amount, due to short circuits, grounds, etc., will not be considered as violations of the permit.

(b) Peaks of load curves due to overlapping loads will not be considered as violations of the permit, provided the duration of any one such peak, measured on the 60,000 horsepower line, does not exceed 1 hour, and provided that the total duration of such peaks in 24 hours, measured in the same manner, does not exceed 2 hours.

Fifth. Maps or charts, verified to the satisfaction of the Chief of Engineers, shall be filed with the Chief of Engineers, showing the exact location of all lines or circuits over which the power is transmitted into the United States under the provisions of this permit; and no change shall be made in such lines or circuits without submitting at the same time to the Chief Engineers or his representative a map or chart showing such change.

Sixth. One of the objects of the law being the preservation of the natural scenic conditions of the Falls and the gorge, it is stipulated that the grantee shall, either directly or through the Ontario Power Co., take steps to restore the natural growth on the sides of the gorge at the point where power is now brought into the United States.

It is further stipulated that no additional power crossings shall be undertaken until the plans therefor have been approved by the Secretary of War.

Seventh. The Secretary of War reserves the right at any time to modify the form of this permit, to change the method or plan of measurements herein prescribed, or to substitute other methods of measurement, whenever in his judgment, such modifications, changes or substitutions are necessary to carry out the provisions of the act of June 29, 1906, under which this permit is issued.

Witness my hand this sixteenth day of August, 1907.

WM. H. TAFT, *Secretary of War.*

Extended September 2, 1911, to March 1, 1912.

#### ADDITIONAL STATEMENT OF MR. COHN.

Mr. COHN. I believe I had better say for the benefit of Congressman Cooper, who raised the question the other day, that there is positively no disposition to keep the diversion down below the limit of 16,200 cubic feet, that would prevent anyone else from getting a permit under the existing law.

Mr. GARNER. Major, will you give the committee an estimate of what it would cost your department to supervise the taking of water on this side and the importation of power from Canada?

Maj. LA DUE. I would not like to hazard an estimate now, especially without knowing how far the supervision would go. We have spent about \$27,700 since the Burton law went into effect, but a very large part of that sum went into these very elaborate investigations, which were necessary in the beginning and which are reported in these two documents.

There will be no such elaborate investigations to undertake now. It will be a question of supervision only, and the cost will be less, but how much less I would not like to say. I think it would be well to reappropriate the unexpended balance of the appropriation made by the Burton Act.

Mr. GARNER. After your investigations were made under this law, for instance, the continued annual expense would be about how much? The stationing of an officer there, would that be the expense?

Maj. LA DUE. We have not had an officer stationed there; we have one or two inspectors who go up there as needed. So far as that feature of it goes, it would probably be only the salary of one or two men.

Mr. GARNER. A very nominal expense, then, after you had made a thorough examination under this provision of the bill?

Maj. LA DUE. A nominal expense. Of course if any especial investigation becomes necessary, we will have to send parties there. In December last it became evident that the Hydraulic Co., owing to the improvements they had been making in their plant, was approaching its authorized limit of diversion, so we sent a party there—just how large a party I do not know. This party made measurements and established a rule to govern the operations of the company and fix the limit of their output.

The CHAIRMAN. If you have anything further you wish to incorporate in your statement, you have that privilege.

SUPPLEMENTARY STATEMENT OF GEN. FRANCIS V. GREENE.

Mr. Chairman, your committee has listened with very great patience on six successive days to statements and arguments of more than 30 individuals, representing a great variety of interests—Members of Congress, State officials, Chief of United States Army Engineers and his assistants, city officials, and representatives of commercial bodies, representatives of the American Civic Association, and representatives of power companies, both those which are in operation and those that have plans.

The discussion has taken a very wide range and has covered every possible topic in this connection—legal, scientific, commercial, sanitary, or emotional.

Now, out of it all it seems to me that four very serious questions have been presented for your consideration, namely, national defense, navigation, regulation of rates, and the scenic grandeur of Niagara Falls. I put that last, not because it is by any means the least important, but because it is the one concerning which there has been the greatest difference of opinion.

With your permission I will try to rehearse as accurately and as briefly as possible a summary of the testimony which has been given to you on these four points.

First. As to national defense. One might wonder just how the question of national defense comes in with the diversion of the waters of Niagara River, and the theory of it, as I understand it, is that the river might have been drained dry, so that it would offer no obstacle to an invading army. In the remote and almost unthinkable contingency of a war with Great Britain or Canada—if such a thing should have happened; if Niagara River had been drained dry—our defense to that extent would have been injured or ruined. Now, on that question there is no conflict of testimony whatever. The only testimony which you have is in these documents. The reports of the engineers state that there had been no injury to the Niagara River as a means of national defense.

The next question—navigation—is a very serious one, and I shall try to choose my words with particular care so as to state the precise nature of the testimony in these reports and what has been said to you verbally in this committee room.

The engineers, that is to say, the subordinate engineers—and by this I mean the officer in charge of the lake survey in Detroit, and his assistants—have determined after most elaborate gauge measurements and computations of a very intricate, scientific character, that there has been a slight lowering in the level of Lake Erie. It is measured in fractions of an inch. It depends upon observations extending over a period of 20 days. Further observations may confirm the deductions already made or possibly may change them, but these results are all that we have, and they are the best that we have at the present time. The channels of the Lakes are designed to have a depth of 21 feet. The effect of the wind and the waves is to change the level of the Lakes by many feet in a very few days, so that while the question of a fraction of an inch in the depth of the Lake Erie channels is not a thing, as these engineers report, which should be entirely disregarded, but being so small in comparison with the depth of the channel, it is of no practical importance. Gen. Bixby testified as to this at the first hearing on Tuesday, January 16. I do not know that I need to tell you who Gen. Bixby is. He was at West Point with me. He is an officer of very great ability who has spent a lifetime—I think it is 25 years or more since he graduated—in studying these scientific questions, especially the questions of hydraulics and of navigation on the navigable waters of the United States. I do not think there is an officer in the Engineer Corps who is so peculiarly qualified to speak on these questions of navigation as Gen. Bixby. He has been secretary of the Mississippi River Commission. In 1906 he made the preliminary reports which formed the basis of the recommendations of the International Waterways Commission at that time. Now, Gen. Bixby, I think, would not say that a fraction of an inch in the level of Lake Erie was a thing which should be neglected or disregarded, but I think he would say—exactly what he did say as I understood him when he testified—that the lowering of the Lake in comparison with the depth of the channel was so slight that it was a matter of no practical importance.

I think your committee can dismiss from your minds any uneasiness about these two first propositions—national defense and navigation.

Now, in regard to the regulation of rates. As I look at it, you have ample authority to regulate rates, but it is a question of expediency, and the testimony which has been given here in favor of the regulation of rates comes from two individuals, and two only—Mr. Hammond, city attorney of Buffalo, and Congressman Smith. Their allegation, as a basis for their request for Federal interference, is that the public service commission is either unwilling or unable to cope with the situation, and therefore they ask the aid of the United States Government to regulate the price of electricity in Buffalo. Well, I think that if that question was submitted to the voters of Buffalo it would not have more than 10 per cent in the affirmative. There is dissatisfaction, as I understand it, about prices for electricity, and the chamber of commerce itself initiated proceedings for an investigation, but they initiated it in the way that the law prescribes, and they wish to bring it before the tribunal which the State of New York has provided to hear and determine such cases, and they are satisfied to abide by the findings of that tribunal. Now, I am told that this letter has been sent within the last two days by the chamber of commerce to your chairman:

"Referring to report in newspapers that the statement has been made to you that the public service commission is unable to cope with the situation of charges by electrical companies for power, I desire to say that that is not the opinion of this body, and to express to you on the contrary that it believes that the machinery devised and in successful operation for the control of public service corporations in general and of the electrical situation in particular is entirely adequate to deal with the subject, and it desires further to state that this is the general feeling in this community.

"This body has originated and promoted an investigation into the charges made in Buffalo for electrical power, which is now pending. It desires to secure for its citizens a readjustment, and in many cases a reduction, of present charges, and it is satisfied with the tribunal established by law to decide the issue."

The chamber of commerce in Buffalo has a membership of more than 3,000. It includes practically every man in any business of any magnitude in Buffalo.

Among its members are the consumers of probably nine-tenths of the power used in Buffalo, practically all of the power except that which is used in private houses. Now, these citizens of Buffalo have a dispute with a corporation under the laws of the State of New York as to the value of the goods or services which one sells and the other buys. The State of New York has provided a tribunal to hear and decide such cases. It, of course, does not decide until it has heard both sides. The corporation and the consumer are both willing to submit their dispute to this tribunal. They are both citizens of New York. I submit that under these circumstances there is absolutely no ground to ask for Federal interference.

Now, the remaining question, and frankly it is the most important question, is the preservation of the scenic grandeur of Niagara Falls. Certain gentlemen have assumed to have a mandate from the people to be the only guardians of Niagara Falls. That mandate is not recognized universally. You have heard testimony in regard to one corporation which moved its plant a mile or two up the river, and thereby lost efficiency, solely for the purpose of preserving the scenic beauty of Niagara. As to the companies that I represent, we have figured up and tried to ascertain about what it has cost us in order to make our works conform to the surroundings and harmonize with the grandeur of Niagara Falls, and it is a little more than \$1,000,000 which we have spent for the purpose of putting our pipes in the rock instead of on the surface and of constructing buildings which were the best that architectural skill could design; so that I can assure you for those I represent and, I think, for the other power companies at the Falls that they regard the scenic grandeur at Niagara quite as much as some who claim to be the sole guardians of it.

Now, no one has appeared before you to advocate injury of Niagara Falls. No one has appeared before you to advocate the diversion of water on either side of the river to an amount which, in his opinion, would injure the scenic grandeur of Niagara. The only question is, what is the limit to which the diversion can be carried without injuring the beauty of the Falls. On that opinions differ, and on that you have had different testimony submitted to you. I called attention at a previous hearing to the testimony given by eminent engineers in 1906 that a diversion of 40 per cent of the total flow, or 80,000 cubic feet per second, would not materially injure the Falls. The Burton law, enacted as a result of that hearing, placed the limit at 15,600 cubic feet on the American side, and by restrictions on transmission from Canada it was apparently intended to indirectly limit the diversion of water on the Canadian side to about the same amount, or some 30,000 to 31,000 cubic feet on both sides, which is the amount which Maj. Laddie has just told you was the maximum taken out in the month of December. Now that you have three opinions, the engineers in 1906—and as to these engineers I would like to say that they had been observing the Falls every day for four previous years; their office windows looked on the Falls, and they were eminent hydraulic engineers—their opinion was 80,000 cubic feet. When the treaty was negotiated it is a matter of common report that during the 18 months that it was under negotiation the negotiators sought the best expert advice that they could get as to the amount of water that could be safely diverted without injuring the Falls. They fixed it at 56,000 cubic feet. The scenic society come here and now say that the treaty is wrong and they must have additional legislation to provide that a less amount shall be taken out than the treaty permits, and in support of their position they quote from these documents. Now, I would like to say something about these two documents which perhaps the committee does not understand. This volume, Senate 105, and the only one from which the civic association has quoted, is dated November 30, 1909. This document, H. R. 246, is dated September 30, 1911. The earlier document was the result of two years' observation; this is the result of five years' observation, and the Secretary of War describes it as "A comprehensive report of the operations of the United States Lake Survey under the appropriation for the preservation of Niagara Falls from June 29, 1906, to June 29, 1911, which summarizes and supplements the previous reports."

Now, the quotations from this larger report were correctly made, but they are only a part of what is said, and even in this larger report quotations could be made on the other side. Some of them I have incorporated in the printed statement which I filed at a previous hearing. The statements in this report, based on five years' study, are, to say the least, much more conservative, much less alarming than the statements in that report; and I refer in detail to these reports because the civic association rests their case on these reports—and

so do we, speaking for the power companies which I represent—and I think the other power companies also.

As the civic association has quoted these reports of subordinate engineers I refer you to the final statement of Gen. Bixby, the Chief of Engineers, the head of the whole engineering organization, made in your presence a few days ago, and with all these reports before him. His statement, I think, was that as to the diversion of 4,400 additional cubic feet on the American side, it was so small an addition to the amount now being diverted that it would produce no appreciable effect upon the scenic grandeur of Niagara Falls; and as to the importation of power from Canada, Congress can not in that manner control the amount of water to be taken out on the Canadian side. His statement was, and he repeated this three or four times, that the demand for power in Canada was growing so rapidly that if it was not imported into the United States, in a very few years, in his opinion (I think he said three years) it will all be taken on the Canadian side; so that you can not preserve the scenic grandeur of Niagara Falls, even if it were in danger, by restricting these importations. Now, I am in position to give you some figures on this question of the growth of consumption of power in Canada which confirm Gen. Bixby's statement derived I have no doubt from a general study of the situation. But the specific facts are these: In the last three years the use of Niagara power in the United States has increased 50 per cent. In the same period the use of Niagara power in Canada has increased 400 per cent. Why, since the figures were made up in this report (Doc. No. 246) last July, the consumption in Canada has increased 20 per cent.

On the question of scenic grandeur I say that you can not save the scenic grandeur of Niagara Falls, if it is in danger from Canada, by restricting the importation of power from Canada, because Canada will use it if it does not come to the United States.

Now, I repeat that we rest our case on these documents. If carefully studied and considered they show that the scenic grandeur of Niagara Falls will not be endangered by the diversion of the water provided for in the treaty.

I submit to the committee that the testimony which you have heard in these elaborate hearings leads to legislation along these lines:

The carrying into effect of the treaty, the diverting of the amount of water on the American side which the treaty authorizes, and suitable provisions for supervision by the Secretary of War to see that the amount which the treaty authorizes to be diverted is not exceeded. The question of who shall receive this 4,400 cubic feet per second, I think, can best be decided by the proper authorities of the State of New York, who will undoubtedly give very elaborate hearings before reaching a decision, in which the rights of all parties can be brought out. As to importation the treaty is silent. It was designedly so. It was intended to give this country the benefit of all the power which Canada would allow to be exported. There has been submitted nothing in the way of testimony before your committee to justify you in attempting to modify, abridge, or restrict this treaty.

#### STATEMENT OF MR. WATROUS.

Mr. WATROUS. The association which I represent would like the privilege, in view of the preceding argument, to read the brief which I presented this morning, which I did not present at that time. I shall ask the privilege of reading it at this time, as it is one based on this last report, which we did not get access to until last Tuesday.

The CHAIRMAN. It is already in the record?

Mr. WATROUS. Yes, sir.

The CHAIRMAN. That will do.

Gen. GREENE. The quotations from this larger report were correctly made, but they were only a part of what was said, and even in this larger report quotations could be made on the other side.

The statements from this report, based on five years of study, are, to say the least, much more conservative, much less alarming. I will not use the word "sensational." The statements in that report—I refer in detail to these reports because the civic association rests its case on these reports and so do we. Speaking of my power company,

the one that I represent, and I think the others, we rest our case on those reports, but on a fair interpretation of them, and as the civic association has quoted these reports of the subordinate engineer, I refer you to the final statement of Gen. Bixby, the Chief of Engineers, the head of the whole engineering organization, made in your presence a few days ago, and with all of these reports before him. I listened very carefully, and I think his statement was this:

As to the diversion of 4,400 additional cubic feet on the American side it was so small an addition to the amount now being diverted that it would produce no appreciable effect upon the scenic grandeur of Niagara Falls, and as to the importation of power from Canada, that was not a matter which Congress could control, so far as ultimately controlling the amount of water to be taken out on the Canadian side is concerned, because, and he repeated this three or four times, the demand for power in Canada was growing so rapidly that if it was not imported into the United States in a very few years, in his opinion, and I think he said three years, I listened very carefully, it would all be taken on the Canadian side. So that you can not preserve the scenic grandeur of Niagara Falls even if it were effected by restricting this importation.

Now, I am in a position to give you some figures on this question of growth of the consumption of power in Canada, which confirm Gen. Bixby's statement, derived, no doubt, from a general study of the situation, but the specific figures are these:

In the last three years the use of Niagara power in the United States has increased 50 per cent. In the same period the use of Niagara power in Canada has increased 400 per cent. Since these figures were made up in this report of last July the consumption in Canada has increased 20 per cent.

Mr. DIFENDERFER. Is it not because they are getting power cheaper?

Gen. GREENE. Whatever is the cause, I am speaking about the scenic grandeur. You say that we hired the newspaper people to raise this issue for scenic grandeur.

Mr. DIFENDERFER. I said so?

Gen. GREENE. Yes; it is hard to discuss such a proposition as that. But on the question of scenic grandeur I say that you can not save the scenic grandeur of Niagara if it is danger, from Canada, by restricting the importation of power from Canada, because Canada will use it if it does not come into the United States.

Mr. DIFENDERFER. We have no control of that. I appreciate that.

Gen. GREENE. Now, I repeat that we rest our case on these documents, fairly studied and considered. At any time the scenic grandeur of Niagara Falls will not be endangered by the diversion of water provided for in the treaty.

Mr. SHARP. In that connection I see the second document, Senate Document No. 105 and House Document No. 246. You approve then more of the House document because it is several years later. Reading from that document on page 13 I find the following language used:

The total changes have resulted in an appreciable decrease in the volume of flow there, due to the deficient depths at the end of the Falls, to a marked interference with the continuity and the length of the crest line, unquestionably marring the beauty of this cataract. While natural causes have been chiefly instrumental in effecting these changes, it appears indisputably that the artificial diversion of the power companies have materially aided to the injury of

interference with the scenic grandeur of Niagara Falls and the additional diversions now contemplated will increase this damage.

Gen. GREENE. The natural causes have been the chief instrument.

Mr. SHARP. But it very plainly states that we could not increase the diversion any more without damage to the Falls.

Gen. GREENE. That is the engineer's opinion, based upon the record of gages, which shows a less volume of water going over the Falls. He does not say that he can see any difference with his eye.

Mr. SHARP. He does say in the same connection that after these observations had been made, which he said were made under most favorable circumstances:

The effect, then, of the total diversion and of the natural change of regimen since 1806 will account for the lowering on the Canadian and Goat Island ends of the Falls, and the mean lake level is over 15 inches and 8½ inches, respectively. The present return to the low stage of the Great Lakes is due to deficiency in rainfall and runoff has had the further effect at Terrapin Point of 2 inches.

Gen. GREENE. Due to three causes, lack of precipitation, wearing away of the apex, and diversion by the power companies. Three causes contributed to that.

Now these photographs—have you ever been to Niagara?

Mr. SHARP. Quite a number of times.

Gen. GREENE. Have you been there within recent years?

Mr. SHARP. Not within five or six years.

Gen. GREENE. Do your photographs, taken last July, give you a different idea of the Falls from what you remember?

Mr. SHARP. Not at all.

Gen. GREENE. That is the whole case.

Mr. SHARP. There was a great mass of water flowing over there.

Gen. GREENE. There is a great mass of water flowing over there now. It is magnificent.

Mr. DIFENDERFER. You stated that your company tried to preserve the scenic grandeur by placing your building in the rocks?

Gen. GREENE. Part of our structures.

Mr. DIFENDERFER. Are these faithful reproductions here in these books?

Gen. GREENE. In what books?

Mr. DIFENDERFER. Of the Niagara Power & Conduit Co.

Gen. GREENE. That is not my company.

Mr. DIFENDERFER. What company—are you not interested in this company?

Gen. GREENE. The Niagara Power Co.?

Mr. DIFENDERFER. Yes.

Gen. GREENE. Not at all.

Mr. DIFENDERFER. It looks to me as though these buildings were set out on the plains.

Gen. GREENE. That is the other company. If you would like to see our buildings, I have photographs of them.

Mr. DIFENDERFER. I do not see any of the rocks, General.

Gen. GREENE. I said we put some of our structures there.

Mr. DIFENDERFER. I understood you to say that you put your buildings there.

Gen. GREENE. Oh, no; I did not say that. I said our pipes, etc.

Now I submit to the committee that the testimony which you have heard in these elaborate hearings leads to legislation along these lines. The carrying into effect of the treaty, the diverting of the amount of water on the American side which the treaty authorizes, and suitable provision for supervision by the Secretary of War to see that the amounts which the treaty authorizes to be diverted is not exceeded. The question of who shall receive this 4,400 cubic feet per second, I think can best be decided by the proper authorities of the State of New York, who will undoubtedly give a very elaborate hearing before they reach a decision, so that the rights of all of the people can be brought out.

As to importation, the treaty is silent. It was designedly so. It was intended to give this country the benefit of all of the power which Canada would allow to be exported, and there has been, I submit, nothing in the way of testimony before your committee to justify you in attempting to modify, abbreviate, or restrict this treaty.

Mr. SHARP. I have before me the treaty. What has it to say in regard to the duration of its terms?

Gen. GREENE. It runs for five years. The treaty—ratifications were exchanged at Washington May 5, 1910, and that is the official date of the treaty. The date when the ratifications were exchanged, not the date when it was signed. It was signed in 1909.

ARTICLE XIV. The present treaty shall be ratified by the President of the United States, etc.

Mr. GARNER. What have you to say to the suggestion of Congressman Smith with reference to retaining in the Secretary of War the right to cancel permits after the Public Service Commission of New York would not give what the people considered reasonable rates. In other words, giving the Secretary of War—making the Secretary of War the appellate court as between the power companies and the Public Service Commission of New York?

Gen. GREENE. Do I understand you, a Democratic Representative from Texas, to ask me what I think of an appeal from the government of New York to the Secretary of War?

Mr. GARNER. Well, I was not advocating that; I was asking you what you had to say about it.

Gen. GREENE. I think it is a monstrous proposition, absolutely inconsistent with the dignity of the State of New York. That is my opinion and I am a Republican.

Mr. GARNER. I wanted to see how far you were going to follow the doctrine in this direction in concentrating the power at Washington instead of the State of New York.

Gen. GREENE. There is no question whatsoever, under the decision of the Supreme Court—I am not a lawyer, but I have got business sense enough to understand some decisions—that the United States has exclusive jurisdiction so far as it extends to navigation. This treaty has fixed a limit to the water to be diverted on the American side. The Federal authorities should see that that treaty is carried into effect. Beyond that we have nothing to do with.

Mr. DIFENDERFER. Do you believe that we are bound to allow these companies to take the limit?



Gen. GREENE. I believe it is expedient to allow them to take the limit in view of the facts.

The CHAIRMAN. Is not that a question for the Government to determine?

Gen. GREENE. That is a question for the United States.

The CHAIRMAN. If the Secretary of War determines how much shall be taken, is it for the State to say who shall have it?

Gen. GREENE. Yes, sir; that is where the line is clearly defined. Navigation belongs to the United States. The Attorney General was here to try to preserve what he thought—I gathered—what he thought were the immemorial rights of New York, to preserve them from national legislation.

The CHAIRMAN. I agree with the law as cited by the attorney general of the State of New York.

Mr. COOPER. While this statement by the civic association goes into the record, yet it would be brought more forcibly to the attention of the committee if the representative of that association could reply to these statements made by Gen. Greene by just reading these few pages, and I ask that that be done in justice to the association which he represents.

The document referred to was read by Mr. Watrous.

Mr. CURLEY. Can you tell me what membership your association has in the United States?

Mr. WATROUS. I can tell you in this way, Mr. Curley. It has some 2,500 what we call annual members, but included in that are some 700 or 800 affiliated societies, composed, we will say, of from 100 to 1,000 members, representing several hundred thousand in the aggregate.

Mr. CURLEY. What salary is paid the president?

Mr. WATROUS. No salary.

Mr. CURLEY. Do you receive a salary?

Mr. WATROUS. Yes, sir; I am the only salaried officer of the association.

Mr. CURLEY. You are paid by the association?

Mr. WATROUS. Yes, sir.

Mr. CURLEY. You are employed permanently on legislative matters?

Mr. WATROUS. No, sir; the legislative matters—Practically all I have done have been in attendance on these meetings; I am the administrative secretary with a great deal of work accumulating on my desk right now.

The CHAIRMAN. Is there any other gentleman who desires to be heard this afternoon?

Mr. SMITH. I would just like to say in connection with that letter presented by Gen. Greene that so far as I know the chamber of commerce has not held a meeting, and no individual has a right to send a communication to this committee purporting to speak for that body. Why was it not signed by the president and secretary if it was an official matter?

Mr. CURLEY. I would like to ask Gen. Greene the date of that letter?

Gen. GREENE. I have not seen the original letter so I do not know. I understood that the letter had been sent to the chairman of this committee on January 24.

The CHAIRMAN. I will state that I received the letter.

Is there any other gentleman here who desires to be heard? If not, the hearings will be closed with the exception of hearing a gentleman who will be here to-morrow morning at 10 o'clock.

The committee will now take a recess until 10 o'clock to-morrow morning.

Thereupon, at 5 o'clock p. m., the committee took a recess until 10 o'clock a. m. to-morrow, January 27, 1912.

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COMMITTEE OF FOREIGN AFFAIRS,  
*January 27, 1912—10 o'clock a. m.*

The committee reconvened, pursuant to taking of recess, at 10 o'clock a. m.

The CHAIRMAN. The committee took a recess yesterday for the purpose of hearing Mr. Blackstock this morning. I understand Mr. Blackstock is here and desires to go on and we will now hear from him.

**STATEMENT OF GEORGE H. BLACKSTOCK, REPRESENTING THE  
NIAGARA FALLS ELECTRIC TRANSMISSION CO.**

Mr. DIFENDERFER. Is yours a Canadian company?

Mr. BLACKSTOCK. Yes, sir; under the provisions of the Burton Act, Mr. Chairman, there was distributed amongst the Canadian companies a certain percentage of the power which the provisions of the act enabled to be imported into the United States from Canada. Our share of that 125,000 horsepower was 46,000 horsepower, the balance being distributed between the Ontario Power Co. and the Canadian-Niagara Power Co., which is a branch of the American-Niagara Power Co., and a small insignificant block allotted to the International Railway, which operates the line on either side of the Niagara River.

We are interested in preserving the rights of the Niagara Falls Electric Transmission Co. with reference to their proportion of the power, of the 46,000 horsepower, which has been allotted to them by the permit of the Secretary of War. We desire to appear before the committee because we understood that some time during the discussion some question had been raised as to why the 46,000 horsepower, which we are entitled to transport to the United States, had not been exported, and we desired to represent to the committee that that resulted from the circumstances and certain difficulties which we had with reference to transmission. We procured the incorporation of a transmission company at Albany and also acquired the franchise of the Niagara Falls Lighting & Power Co., or rather the Gas & Electric Lighting Co., and have altogether spent in the neighborhood of a half a million dollars in order to put ourselves in a position to transmit the amount of energy which the permit of the Secretary of War entitles us to import into the United States.

Now we are completing our arrangements with reference to that.

In the meantime, of that amount, 12,000 horsepower have been transmitted from time to time to the Buffalo Cataract & Power Co.

for use there, and which has been used in connection with the lighting of the city of Buffalo, and to some extent has been used as a reserve power, and has been very efficient for that purpose, and our only object in appearing before the committee is to prevent any misapprehension on the part of the committee as to the nonuser of the balance of their power.

It is the intention of the company to vigorously place that at the disposal of any persons who might desire to have access to it.

Mr. CLINE. You are purely a transmitting company, or do you generate power?

Mr. BLACKSTOCK. No; we are a generating company. And we desire to put ourselves into a position to maintain our business and to import the 46,000 horsepower which the permit of the Secretary of War enables us to do, and in furtherance of that we are entering into arrangements now with the company about to start an important plant at La Salle, by which we shall sell to them 12,000 horsepower, and up to the present time we have answered any demands that have been made upon us for power in the United States to the extent of 12,000 horsepower, to which I have referred. We are now making arrangements which will enable us to import the balance of 46,000 horsepower as and when it may be required. Of course, as you will understand, it is necessary for us to have the tenants of the power in sight, because we have got to make our transmission arrangements conformably to the exigencies of these tenants when they appear, and we are now making arrangements with reference to the company at La Salle, of which I have spoken, and also carrying out the arrangements that we have made under the powers vested in us by the acquisition of the Niagara Falls Gas and Lighting Co.

We desire to ask the committee to bear in mind that we have the fullest interest in maintaining the permit given to us by the Secretary of War and intend to use it as we have opportunity to do.

Mr. DIFENDERFER. I would just like to ask a question. You can at any time refuse, can you not, to transmit power to the United States?

Mr. BLACKSTOCK. I think so.

Mr. DIFENDERFER. In the event of industry being created there for the use of power, it would be to your advantage to use it at home, would it not?

Mr. BLACKSTOCK. Well, I should have thought not, sir, if it were in the immediate area of Niagara Falls.

Mr. DIFENDERFER. Are you associated in any way—that is, your company—with transmission of power to Windsor?

Mr. BLACKSTOCK. No.

Mr. DIFENDERFER. That is another company?

Mr. BLACKSTOCK. That is another company; yes, sir. We have no transmission. Our transmission is practically to Toronto.

Mr. DIFENDERFER. Then you have no connection, have you, with the Hydro-Electric Co.?

Mr. BLACKSTOCK. None whatever.

The CHAIRMAN. I understand Mr. Bowen desires to make a brief additional statement. We will hear him now.

**STATEMENT OF MILLARD F. BOWEN, REPRESENTING THE ERIE AND ONTARIO SANITARY CANAL CO.**

Two eminent engineers have stated that the diversion already made will not affect the beauty of the Falls. Maj. Charles Kellar, of the Corps of Engineers, reports in one paragraph this:

While the preceding conclusion as to the effect produced upon the Falls by the existing diversion is a statement of opinion based upon ascertained facts, the interest of justice seems to demand the further statement that in my opinion the damage already done, and that which may be anticipated from further diversion and from the impending fall in the level of Lake Erie, may be largely, if not entirely, remedied by a submerged dam placed in the bed of the river immediately above the Horseshoe Falls. The dam as proposed and planned would serve to change the direction of the flow so as to increase the streams that feed the falls at Terrapin Point and at the Canadian shore. The decrease in the mighty volume that overflows the center of the apex of the horseshoe would not be noticeable. If built, the dam should be paid for by the interested power companies, but Canada and the United States should do the actual work under some form of international agreement. A very direct result of the construction of this submerged dam would be a diminution in the rate of recession of the apex of the horseshoe. This result is extremely desirable. (P. 15, S. Doc. No. 105, Rept. of Maj. Charles Kellar.)

The other engineer referred to as having a plan is the one connected as the chief engineer of our company, Isham Randolph, of Chicago, who was invited last year by President Taft to present his plan to the Canadian authorities, and that is to stretch two cables across from Goat Island to Canada above the Horseshoe Falls, and use these cables for transmission of reenforced concrete blocks, fastened together, immense, large, and heavy concrete blocks, and drop these blocks into the channel, into what is called the "thalweg" above Horseshoe Falls, where the recession is very dangerous and continues year by year and may result in great damage. The dropping of those blocks into the deepest part of the center of the Horseshoe Falls will diffuse the water to both sides toward the edge of the Falls and without affecting the beauty of the center it will increase the beauty of the sides.

As Mr. Randolph has said, and give even further amount of water for commercial purposes without affecting the beauty of the Falls.

Now, those are a partial answer, if not complete answer, to the complaints of the civic association, which has maintained that there will be irreparable damage to the Falls.

**CLOSING SUMMARY BY ROME G. BROWN IN BEHALF OF THE NIAGARA FALLS POWER CO. AND CANADIAN NIAGARA CO.**

Mr. Chairman and gentlemen of the committee: After listening to Gen. Greene's admirable summary of the facts shown at this hearing and of his logical conclusions therefrom, I felt that little if anything could be added to emphasize the justice of the position which is here taken by the companies which I represent. However, despite the indisputable facts which have been shown, some of the questions which have been asked and quite a number of statements that have been made during the hearing, would indicate that there is still some misapprehension in regard to the attitude of these companies toward

the questions which are before you. Let me, therefore, briefly summarize certain of the points.

#### THE SITUATION OF THE NIAGARA FALLS POWER CO.

This company has certain vested property rights by virtue of (1) its riparian ownership, (2) its grants by the next lower riparian owner, the hydraulic company, and (3) patents and grants from the State of New York, which State is riparian owner below, both it and the hydraulic company, and which State also holds whatever sovereign interests there are of use or control in the waters of Niagara River upon the American side, subject only to the sovereign right of the Federal Government to prevent unreasonable interference with navigation. These property rights, as defined by the law and as described in the various grants referred to, include the right to take from the Niagara River above the Falls a quantity of water sufficient to make 200,000 horsepower and to discharge the same below the Falls by means of a tunnel passing by and through the lands of the two lower owners; that is, of the hydraulic company and of the lands of the State of New York used for a park. These rights were acquired previous to the year 1900, and a plant had been constructed and put in operation, requiring them, as it now does, at least 10,000 cubic feet per second of water to operate the same on an economical basis, although that quantity is not sufficient for its maximum capacity. It was thus operating that plant for years before the passage of the Burton Act in 1906, but since the passage of that act has drawn only 8,600 cubic feet per second, submitting temporarily to the terms of that act until the treaty should be made, as contemplated by that act, adjusting between the two countries the matter of diversion. It claims to operate by virtue of its riparian rights, although permits under the Burton Act have been accepted and complied with, relying upon the faith that its rights and equities would be recognized in the final adjustment of the matter under the terms of the treaty. The Treaty of 1909 recognized the injustice of the restrictions of the Burton Act, as neither expedient nor necessary to preserve scenic grandeur, and as unjust and inequitable to this company, and fixed the limits of diversion at a quantity which would allow this company 1,400 cubic feet per second more and the hydraulic company 3,000 cubic feet per second more and thus allow each company to operate at its normal economical capacity of 10,000 cubic feet per second for this company and 9,500 for the hydraulic company. No other power plants exist on this side and none could be constructed for the purpose of utilizing the 4,400 cubic feet per second increase provided in the treaty over the 15,600 fixed by the Burton Act as the total diversion on this side, the additional quantity being too small to warrant the expense of any new plant.

It has been assumed and stated in newspaper articles, in statements by representatives of the civic association, and even by a Senator of this Congress (in a statement made in public while these hearings were in progress), that this company is asking for an unreasonable increase in the amount of diversions allowed on this side with the intention of further installations in order to utilize such increase, and

that its position here is one of a further "attack" upon the scenic grandeur of the Falls. You gentlemen who have heard the facts here know this is not true. The treaty fixes the total limits of diversion upon this side so as to forbid any further installations than had been made prior to the Burton Act. Although this company claims the legal right to double its installation and to operate the same, it asks here only that the treaty limits be observed, and that thereby it may be enabled to operate economically its installation which had been installed and put in operation before the question of scenic grandeur was ever thought of in Congress. This company originally installed with particular respect for scenic grandeur and protected the landscape and scenic beauty of the Falls, although at great expense and loss of head. The undisputed facts presented here show that the extra amount of diversion up to the treaty limits will not affect scenic grandeur nor any public interest.

#### SITUATION OF THE CANADIAN NIAGARA POWER CO.

Before the Burton Act was thought of, this company had installed and had in operation a plant upon the Canadian side taking its water from the pool below the upper crest, so that it could not possibly have any effect upon navigation. It also constructed with regard to scenic beauty. It acquired its riparian rights solely from the Canadian Government, and as consideration therefor agreed to reserve one-half of its developed power for use in Canada when required. This company, as the other two Canadian investors, were intended to be protected by the treaty of 1909, so far as consistent with the public interests involved in the question of scenic grandeur, and therefore that treaty made the total limit of diversion upon the Canadian side 36,000 cubic feet per second, which was no more than sufficient to supply the demand of the three installations already made and projected upon that side by those three companies. The limits of total diversion upon both sides having been fixed by the treaty, the excuse for prohibition of importation to the American side ceased to exist; and therefore the treaty contained no such prohibition. This was a concession to, or rather proper adjustment with Great Britain in behalf of Canada to protect not only the public interests of Canada but the interests of Canadian investors. It was an adjustment also acquiesced in by this country in making the treaty, because it was recognized to be for the public interest of this country, where industrial development had created a demand which would absorb all the power developed upon this side and all the power that could be imported from Canada. This company, therefore, with the other Canadian companies, join with the distributing companies upon the American side, to demand that the question of importation be left as the treaty left it—without any prohibition or restriction.

THE EQUITABLE POSITION OF BOTH THE AMERICAN AND CANADIAN  
POWER COMPANIES.

Certain facts have been demonstrated at this hearing:

(1) That the total diversions allowed by the treaty can have no appreciable effect upon navigation or upon the integrity of the boundary line nor injure military defense—that therefore there is no ground for Federal interference, the right to which is limited to preventing an unreasonable interference with navigation:

(2) That, although the protection of scenic grandeur is not within the proper scope of Federal legislation (for if it belongs to any sovereign power, in this case it belongs only to the State of New York), nevertheless the total diversions allowed by the treaty will not have any appreciable effect upon the scenic grandeur of the Falls, and in any event the extra 4,400 feet allowed by the treaty on the American side can have no effect; and that, with artificial diversions so limited, the danger to scenic grandeur lies wholly in the effect of natural causes, like erosion, which dangers, together with any speculative injury by diversion, can be averted by artificial means;

(3) That the total diversion allowed on the Canadian side will surely and quickly be made and that over that matter Congress can have no control, and that any restriction or prohibition upon importation to this side is objectionable for the following reasons:

(a) The entire diversion upon the Canadian side will surely be made within a short time, and a prohibition of importation will not help scenic grandeur or any other public interest;

(b) The American market is ready and is now demanding all the power that can be imported beside all that can be developed on this side. The demand is increasing faster than the power can be furnished, even with free importation. With importation prohibited, industrial development stops upon this side and progress upon the Canadian side. That one of the two countries which first gets hold of the power will keep it;

(c) The cutting off of the supply which would exist otherwise than for prohibition or restriction tends to increase the price;

(d) The prohibition can not be sustained on the ground that it is a tariff regulation, for it is not a general prohibition, but a special and local one;

(e) It is repugnant to the spirit and terms of the treaty of 1909 by which each country agreed with the other that each might have the privilege of a certain limited diversion, with the American market in mind, and Canadian investments were made on the strength of the right to import, and the limit of that right was impliedly fixed by the treaty. A prohibition by Congress is simply saying to the Canadians that we have given them the right to divert 36,000 on their side, but we will attempt to control the amount of that diversion, temporarily at least, by a provision repugnant to the treaty and at the same time control the diversion upon this side as we see fit.

(4) It has further been shown that as the diversion of the extra 4,400 cubic feet per second allowed by the treaty on this side can not affect scenic grandeur or any public interest, the treaty amount should

be observed; that, however, is too small an amount to make any new power plant feasible. The navigation, sanitary, and power project suggested by Mr. Bowen is not only illegal and impracticable, but is entirely useless as a sanitary measure, as stated by Dr. McLaughlin, of the United States Health Bureau. More than that, it is not only chimerical but is proposed by a company that has obtained no real estate rights whatever and involves a \$35,000,000 proposition based upon \$100,000 capital, which capital has been paid in just enough to make a few maps and pay promoters. The 4,400 feet increase must of necessity go to the present plants, and of right should go to them in such quantities as to allow normal economical operation of their plants, as the same were installed before diversions were attempted to be limited.

(5) The vested legal rights of the Niagara Falls Power Co. (and I assume it is the same with the Hydraulic Co.) are urged here, not for the purpose of getting specific legislation allotting the extra power to them directly, but for the purpose that their rights and equities may not be ignored to the extent that the proposed act shall prevent those rights and equities being taken into consideration in the future by some official person or body to whom the authority of allotment of this power shall be delegated. It might be unwise for Congress to attempt to say that these companies should have the extra water, or in what proportions. It would be still more unwise to make any provisions so that these two companies, or either of them, should be shut off from the extra power, or that one company should be preferred to the other. That should be left to the good judgment of the person or commission authorized to make the allotment, with the opportunity for hearing to these companies and to any other interests that might appear, whether such authority be the Secretary of War or a New York commission or the State itself. Consequently, the amount limited to be permitted to any one company should not be less than 10,000 cubic feet as a total. The present limitation of 8,600 to any one company would mean that some of the extra 4,400 cubic feet could not be allotted to any company; for the present permits to these companies are, respectively, 8,600 and 6,500, while their normal economical capacities are, respectively, 10,000 and 9,500, and the 4,400 is not sufficient to warrant any new plant by any new company, and much less would a lesser quantity warrant such new construction.

(6) While it would be hypocritical for either the Niagara Co. or the Hydraulic Co. to claim that they would not really like to have the entire 4,400 feet, it would be unfair to either company to include any provision in the act which would of necessity result in giving to the other company the entire 4,400 feet. Such would be the effect of a provision giving it to the company which operates at the highest head, and therefore with the most efficiency, because that would exclude the Niagara Co., whose equities are particularly strong upon this point. The Niagara Co. constructed at a loss of some 50-foot head for the very purpose of preserving scenic beauty and set its works far up the river, using a long canal by which some head was necessarily lost. This was done under the advice of the best engineers and landscape artists. The Niagara Co. would ask of the 4,400



feet only 1,400 and would willing leave the other 3,000 to the Hydraulic Co. It would be absurd and unjust that legislation, enacted to protect scenic grandeur, should penalize a company which had shown the most regard for that interest and in doing so had sacrificed in efficiency, by providing that its very sacrifice for that public interest should be made the ground of discriminating against it and in favor of another company whose works, in appearance and in location, had been installed comparatively with a disregard for scenic grandeur.

#### THE QUESTION OF RATES.

It appeared conclusively that the State of New York, through its public service commission has full power and authority to regulate rates to consumers, and that there is no need of any exercise of such power in this matter by Congress, even if it had authority. Such attempted exercise by Congress would be an interference with the right of New York. This applies both (1) to rates for power produced on the American side and (2) rates for power imported from the Canadian side.

#### AS TO RATES FOR POWER PRODUCED ON THE AMERICAN SIDE.

These rates, being for power produced and distributed on the American side and in the State of New York, are manifestly within the sole jurisdiction of that State. As a general rule the producing company sells in bulk to a distributing company, as, for instance, the Niagara Falls Power Co. delivering to the Cataract Power & Conduit Co. at the city limits of Buffalo at a certain price at that point, which includes the transmission from the producing plant to the city limits. With the rate thus fixed at the city limits, the public can have no concern if the ultimate cost to the consumer charged by the distributing company is a fair rate. The price at the city limits is \$16 per horsepower per annum, and the cost of such transmission alone, including a fair return on the necessary transmission line and apparatus, is about \$6.50 per horsepower (see statement of Mr. Barton). This makes the charge figured at the bus-bars of the producing company about \$9.50 per horsepower, which is approximately the same as that paid by the Canadian Hydro-Electric Commission to the Canadian producers. The prices paid by consumers in the city of Buffalo are shown by the following schedule of rates, which are published by the Cataract Power & Conduit Co., and which are uniformly adhered to:

*Two-charge rate.*

## FIRST CHARGE FOR DEMAND.

One dollar per kilowatt per month for the maximum 2-minute kilowatt demand during the month.

## SECOND CHARGE FOR ENERGY.

	Per kilowatt hours.
For 1,000 kilowatt hours or less per month.....	\$0.02
Excess over 1,000 kilowatt hours up to 2,000 kilowatt hours.....	.015
For 2,000 kilowatt hours.....	.015
Excess over 2,000 kilowatt hours up to 3,000 kilowatt hours.....	.012
For 3,000 kilowatt hours.....	.012
Excess over 3,000 kilowatt hours up to 5,000 kilowatt hours.....	.01
For 5,000 kilowatt hours.....	.01
Excess over 5,000 kilowatt hours up to 10,000 kilowatt hours.....	.008
For 10,000 kilowatt hours.....	.008
Excess over 10,000 kilowatt hours up to 20,000 kilowatt hours.....	.0075
For 20,000 kilowatt hours.....	.0075
Excess over 20,000 kilowatt hours up to 40,000 kilowatt hours.....	.007
For 40,000 kilowatt hours.....	.007
Excess over 40,000 kilowatt hours up to 80,000 kilowatt hours.....	.0066
For 80,000 kilowatt hours.....	.0066
Excess over 80,000 kilowatt hours.....	.0064

*Example.*—A 75 kilowatt (100 horsepower) motor running 10 hours per day, taking 75 kilowatt (110 horsepower) at times as a maximum, but averaging throughout the day 56 kilowatt (75 horsepower) would in 25 days per month consume current as follows:  $56 \times 10 \times 25 = 14,000$  kilowatt hours.

The charge for this at the above rates would be as follows:

Demand charge, 75 kilowatt, at \$1.....	\$75.00
Energy, 10,000 kilowatt hours, at \$0.008.....	80.00
4,000 kilowatt hours, at \$0.0075.....	30.00
Total monthly charge.....	185.00

*Demand rate.*

Applicable to 24 hours' use of power, and based on monthly maximum demand.

	Per electric horsepower per annum.
When the demand equals or exceeds 100 horsepower, at the rate of.....	\$36.00
When the demand equals or exceeds 200 horsepower, at the rate of.....	32.50
When the demand equals or exceeds 300 horsepower, at the rate of.....	30.00
When the demand equals or exceeds 500 horsepower, at the rate of.....	27.50

Service is delivered to consumer's premises at 2,200 volts, 3 phase, 25 cycles, alternating current.

The above was procured and furnished me by Mr. Barton in accordance with the suggestion made by some of the committee, to be included in the record of this hearing. These rates are no higher than many of the rates to consumers in Canada charged by the distributing companies there for power furnished by the Hydro-Electric Commission, whether furnished directly by that commission or through subsidiary distributing companies. The Toronto rates are even higher, and at Bridgeburg the price for quantities of 200 horse-

power is \$39 as against \$32.50 in Buffalo (see Mr. Barton's statement). Under the strictest construction, the American companies, producers and distributors, are entitled to a fair return on their investment, including a fair profit. In Canada, theoretically, the Hydro-Electric Commission supplies at cost. On this side it may be true in one sense of the word that there are two "profits"; but it is clearly shown that each company only gets a fair profit on its capital investment and that the cost of such investment in Buffalo for the distributing company is very great, being increased by the obligation to put conduits underground and other expensive requirements. If this expense were not incurred by the distributing company it would have to be by the producing company, and the two profits, so-called, are both only equal to the one profit which would be allowed if the producing company distributed and delivered to the consumer (see statement of Mr. Barton and Judge Kenefick). As a matter of fact, no one is demanding a change of rates. It has been impossible to get 100 consumers of power furnished by the Cataract Power & Conduit Co. to enter a protest. The question of rates is manifestly a political one (see statement of Corporation Attorney Hammond). In any event, all the machinery and power for investigating and regulating rates, as well as the proper jurisdiction thereof, rests with the State of New York and its public-service commission. On the American side the State already has its return in State taxes as well as free electricity for light and power and also for use of the State in the State Reservation at Niagara and the public buildings thereon (see chap. 513, New York Laws, 1892), and to the city of Buffalo and other cities in taxes upon liberal assessments, not only upon the property of the power company but also upon the property of industries attracted by cheap power.

The standard 10-hour meter power at a rate which affords a maximum use of 100 horsepower and an average use of 75 horsepower for a month of 250 hours amounts at the city of Niagara Falls to \$144.17, as against over eight times that price in Boston, six times that rate in Philadelphia, over four times that rate at Chicago and New York, and nearly four times that rate at Cleveland. At Buffalo the rate for the same amount of power is \$185, the extra price over Niagara Falls being on account of the extra cost of transmission to Buffalo, but the Buffalo rates are only a small percentage of rates in other cities not located so as to avail themselves of the Niagara power.

The industrial growth of the cities using Niagara power from 1900 to 1905 is shown by the following figures, showing values of manufactured output:

Buffalo, from \$126,156,839 to \$172,115,101; Niagara Falls, from \$8,540,184 to \$16,915,786; Lockport, from \$5,352,669 to \$5,807,908; Rochester, from \$59,668,959 to \$82,747,370; Syracuse, from \$26,546,297 to \$34,823,751.

In 1909 these figures for Niagara Falls had increased to \$28,652,000 or about 80 per cent. Similar increases are shown in the other cities. Most of this increase was prior to 1907, since which time the restrictions on importation and the limitations upon this side, fixed by the Burton Act, have kept industrial development in these cities comparatively at a standstill.

## RATES FOR POWER PRODUCED ON THE CANADIAN SIDE.

As already shown, the Canadian Hydro-Electric Commission take the power distributed upon the Canadian side at the bus-bars of the producing plant and pay all the expense of construction, maintenance, and operation of transmission facilities. More than that, the Canadian plants are located upon the property belonging to the Province of Ontario and hold under leases, instead of being independent proprietors, as are the American power companies. As a consideration for this concession, the Canadian companies are supposed to deliver certain quantities to the Canadian commission at cost. However, it has been shown that, considering the transmission by the Niagara Company on this side to the point where the charge is \$16 per horsepower per annum, delivered in large quantities under contract, the price delivered in bulk by the producing companies is practically the same on this side as upon the Canadian side. It has also been shown that the cost to the consumer upon the Canadian side argued in favor of American private management as an economy and an advantage to the consumer.

As to the price to the consumer on this side of imported power, it goes without saying that the price delivered on this side in bulk could not possibly be the same as the price delivered in bulk at the bus-bars of the producing plant on the Canadian side, for the cost of transmission across the river is expensive, and a fair return upon such cost and of installment and operation must be added (to fix the price of power delivered at the American side of the river) to the cost of delivering the same power on the Canadian side, and for power delivered in bulk after further transmission to the city of Niagara Falls or the city of Buffalo a further cost must be added. The figures already given show that the prices prevailing for delivery at the city limits of Buffalo or to the consumer in the city of Buffalo can not be less for power imported from Canada than that which is charged for power produced on this side.

The whole discussion and showing with regard to rates shows that the demand and need is not for lower prices but for more power, and that this demand is for all the power that can be produced upon this side and for all the power that can be imported from the other side, free from prohibition or restriction, up to the full amounts provided in the treaty of 1909.

## SCENIC BEAUTY PLUS INDUSTRIAL GRANDEUR.

Sentimentalists who, without investigation and with misconception of the facts, blindly worship an exploded theory and echo a mere hue and cry, as do our friends the president and secretary of the civic association, phrase and quote phrases eloquently framed upon the grandeur of the world-renowned Niagara. The theory upon which their campaign was based prior to the Burton Act of 1906—that the scenic grandeur of the falls was in danger by reason of diversions for power—has been exploded by three years of investigations and reports by the United States survey, upon the basis of which provisions of the treaty of 1909 were made. Those expert conclusions have been confirmed by two years of further careful investigation and experience. They conform with the experience and observation of every

observer of the falls—that no appreciable change has been caused to the scenic grandeur by power diversions. Nevertheless, by an appeal to prejudice these agitators have brought forth denunciations from the press and have falsely created the impression that the two American companies have made and are now making an “attack” upon Niagara; that because they are seeking to have the treaty provisions observed and confirmed by a new act which shall replace the mere conjectural provisions of the temporary measure, known as the Burton Act of 1906, with an act that shall recognize the limitations considerably, conservatively, and expressly fixed by the treaty, they are asking authority for unlimited diversions with a view to further installation. The cry has been put forth that Niagara is again in danger, although that question has been scientifically passed upon and the provisions necessary to avoid such dangers were fixed and established by the treaty which it is now sought to have enforced. They ignore the fact that the Niagara Falls Power Co. have not made any additional installations since long before the Burton Act was passed and that its installation is for only one-half the capacity to which it has a right under the law and that it only asks here for a small fraction of the increase fixed by the treaty in order properly and economically to operate its installation. They fail to recognize that that company, from the very start, has studiously and consistently and continuously shown its regard for the scenic grandeur of the falls, even at expense and loss to itself, voluntarily incurred before others had raised the question of scenic grandeur. No one has more appreciation or regard for the beauties of Niagara and for their preservation than the officers and stockholders of this company. Its contest here is not antagonistic to the cause of scenic beauty but for another grandeur, the utilization by man and for the benefit of man and communities of the energy which is daily going to waste over the falls; not all that energy, but only such use thereof as is, in fact, and as has been found by scientific investigation to be entirely consistent with the preservation of scenic beauty and of every other public interest. The industrial grandeur which they stand for is not inconsistent with the cause of scenic beauty, but it is one which appeals to the highest sense of beauty, power, and achievement.

Mr. H. G. Wells, in *Harpers' Weekly* of July 21, 1906, said:

“The dynamos and turbines of the Niagara Falls Power Co., for example, impressed me far more profoundly than the Cave of the Winds; are, indeed, to my mind, greater and more beautiful than that accidental eddying of air beside a downpour. They are well made visible, thought translated into easy and commanding things. They are clean, noiseless, and starkly powerful. All the clatter and tumult of the early age of machinery is past and gone here; there is no smoke, no coal grit, no dirt at all. The wheel pit into which one descends has an almost cloistered quiet about its softly humming turbines. These are altogether noble masses of machinery, huge, black, slumbering monsters, great sleeping tops that engender irresistible forces in their sleep. They sprang, armed like Minerva, from serene and speculative, foreseeing, and endeavoring brains. First was the word and then these powers. A man goes to and fro quietly in the long clean hall of the dynamos. There is no clangor, no racket. Yet the outer rim of the big generators is spinning at the pace of a hundred thousand miles an hour; the dazzling clean switchboard, with its little

handles and levers, is the seat of empire over more power than the strength of a million disciplined, unquestioning men. All these great things are as silent, as wonderfully made, as the heart in a living body, and stouter and stronger than that. \* \* \*

"When I thought that these two huge wheel pits of this company are themselves but a little intimation of what can be done in this way, what will be done in this way, my imagination towered above me. I fell into a day dream of the coming power of men and how that power may be used by them. \* \* \*

"For surely the greatness of life is still to come; it is not in such accidents as mountains or the sea. I have seen the splendor of the mountains, sunrise and sunset among them, and the waste immensity of sky and sea. I am not blind because I can see beyond these glories. To me no other thing is credible than that all the natural beauty in the world is only so much material for the imagination and the mind, so many hints and suggestions for art and creation. Whatever is, is but the lure and symbol toward what can be willed and done. Man lives to make—in the end he must make, for there will be nothing left for him to do.

"And the world he will make, after a thousand years or so.

"I, at least, can forgive the loss of all the accidental, unmeaning beauty that is going for the sake of the beauty of the fine order and intention that will come. I believe—passionately, as a doubting lover believes in his mistress—in the future of mankind. And so to me it seems altogether well that all the froth and hurry of Niagara at last, all of it, dying into hungry canals of intake, should rise again in light and power, in ordered and equipped and proved and beautiful humanity, in cities and palaces and the emancipated souls and hearts of men. \* \* \*"

Prof. Walter Frewen Lord said in the *Toronto Mail and Empire* of December 4, 1906:

"I went over the Niagara power plant at the Falls the other day. It was a revelation to me. The cataract was wonderful, of course, but it struck me that the work of man in harnessing it was far more wonderful. It seemed to me the greatest thing that was ever attempted—the greatest thing on earth."

Rev. J. N. Hallock, D. D., said recently in the *Christian Worker and Evangelist*:

"A new Niagara, 'harnessed,' but not hushed, with its beauty unmarred and its torrential fury undiminished, now greets the astonished eyes of pilgrims to this picturesque region. The hand of the engineer has left the mighty cataract untouched, while adding to the attractiveness of nature's greatest wonder. Niagara is practically just it is was 10 or 20 years ago, impressive in its combination of picturesque beauty and awe-inspiring grandeur. The rapids and whirlpool still excite the admiring wonderment of men. But there is much more than the Falls and the scenic beauties of the river to interest and charm those who visit this new world Mecca.

"I am not sure but that the popular apprehension regarding the possible destruction of the Falls by the water companies has increased the tide of travel in this direction this summer. Thousands of persons no doubt actually believed they were gazing upon the cataract for the last time. Natural Niagara is still a spectacle of beauty and power; industrial Niagara is a wonderful demonstration of man's

mastery over the forces of nature. The works of the engineer which use the waters of Niagara River to drive the wheels of industry are even more spectacular than the cataract itself. \* \* \*

"After rushing the turbine wheels beneath these power houses, developing a total of 110,000 horsepower, the water passes through a tunnel a mile long under the city of Niagara Falls, and empties into the lower channel under the first steel bridge. Over 1,000 men were engaged continuously for more than three years in the construction of this tunnel, which called for the removal of more than 300,000 tons of rock and the use of more than 16,000,000 bricks for lining.

"As these power houses represent the first attempts to 'harness' Niagara upon a big scale and embody the latest achievements of electrical engineering, they are visited yearly by thousands, and form one of the attractions of the Niagara regions.

"It is in no small measure due to the energy, courage, and perseverance of the directors of the Niagara Falls Power Co. and their associate engineers that Niagara Falls owes its present importance as an industrial center.

"Upon October 4, 1890, ground was broken at Niagara Falls, N. Y., for the initial power installation of the Niagara Falls Power Co. The trial development was for 15,000 horsepower. At that time three small towns, with a combined population of less than 10,000, were contained in the limits of what is now the city of Niagara Falls. The assessed valuation of all three towns was about \$7,000,000. Five years later the first electrical power from the initial installation was delivered commercially to the Pittsburgh Reduction Co. for the manufacture of aluminum. To-day, 16 years after the breaking of ground for the tunnel, the aggregate amount of power developed by the Niagara Falls Power Co. and its allied interest, the Canadian Niagara Power Co., is about 160,000 horsepower, with additional capacity in course of construction amounting to 60,000 horsepower. Niagara Falls is now a city of almost 30,000 inhabitants, with an assessed valuation amounting to over \$20,000,000. Such in brief are some of the results accomplished by the men and engineers who harnessed Niagara Falls. Less than 4 per cent of the total flow of water over Niagara Falls has been diverted by these companies and its beauty and grandeur are unimpaired."

The establishment of the great works of the Niagara Falls Power Co., the pioneer not only in the establishment of great hydraulic and electrical units, but the first projector of extensive power transmission in America, brought forth the following comment in the New York Tribune by Mr. Royal Cortisson, an art critic of the first rank:

"Being utterly ignorant of these things, I won't commit the impertinence of pretending to appreciate the genius embodied in those colossal fabrics. All I can tell you is that they made me feel as though I was looking on while some unthinkable Olympian went gloriously mad, in a kind of divine frenzy, and expressed himself in terms raising the art of the Egyptian temples to a higher power, giving to things of overwhelming bulk an immeasurable life and purpose, and somehow putting over them a glamour of the subtlest delicacy and charm. It was like a fairyland created for the pranks of the high gods. It was like a force of nature tamed and held by a silken thread. I won't say it was like the most wonderful thing in the world. It is itself the most wonderful thing in the world."

## THE CAMPAIGN OF SCARE.

It is a significant fact that during hearings extending over two weeks, given the widest publicity, there appeared before this committee only two persons who had any other suggestion to make than that the full limitations as to diversion and as to importation, allowed by the treaty of 1909 should be the basis of the proposed act of Congress. The first of these was Mr. Spencer, who claimed to be a photographer and engineer, and who explained the extent of the natural erosions of the Horseshoe Falls, and who pretended to state that the change in the appearance of the crest of those falls, which had developed in the past 20 years, was due to artificial diversions of water for power. The value of his evidence, or lack of value, was shown by the fact that he claimed that the barring of the crest upon the Canadian side of the Horseshoe Falls which enabled the Canadian park commissioners in 1902 to fill in 250 feet of that crest line for the purpose of improving the scenic effect of that Falls by obliterating certain thin streams which existed only at times of high water, was caused by artificial diversions for power when as a matter of fact the artificial diversions had not begun at that time.

The only other person who appeared to advocate a retention of the provisions of the Burton Act or anything less than the limitations of the treaty of 1909 was the civic association, through its president and its secretary. They made the same arguments as were made in 1904 and 1905, before any official investigations or reports had been made. During the hearings before this committee these officers neglected to bring before this committee any evidence, even by the way of statement, in support of their contention or in opposition to the contention of every other private and public interest which was there represented, the producers and consumers upon both sides of the river—the State of New York, the city of Buffalo, and the cities of Windsor, Ontario, and Detroit, Mich., and others—all urging an act confirming the terms and limitations of the treaty. The record made by these hearings was conclusively against the contention of these agitators and in favor of that made by all the representatives of both public and private interests who appeared before the committee. The record speaks for itself, but with this the civic association was not content. It set out deliberately to throw a scare into the members of this committee as well as into other Members of the Congress. At great expense and with a great deal of labor, as one of the officers has since boasted, it was arranged that this committee and other Members of Congress should be flooded with letters and telegrams in order to overcome the cool and deliberate judgment of the committee, which it seemed, could reach only one conclusion from the evidence which had been brought before it at the appointed place and time. The result was a deluge of communications, by letters and telegrams, solicited and procured for the purpose of creating an impression upon the members of this committee that the public were interested to prevent any extension of the present legislative limitations. There is in fact no such public interest or public demand for any restrictions narrower than those contained in the treaty of 1909. The public interests and demands may be evidenced by the fact that on the evening of January 26 last the author of the Burton bill had been for some days announced to deliver a public lecture upon conserva-



tion, with particular reference to the preservation of Niagara Falls, in a large hall in Brooklyn, N. Y., with a seating capacity of about 3,000. There were by actual count just 47 people present, including the stenographer who was sent to make a verbatim report of his address. Through the same influences have resulted misrepresentations in the public press in regard to these hearings, against which some of those who appeared before you have been obliged to defend themselves.

We may expect that such methods will be continued. But the public have a right to expect that, upon the record which is made at these hearings, this committee will act judicially, fearlessly, and independently and frame and recommend an act with provisions sufficient properly to carry out the provisions of the treaty and which at the same time shall be sufficiently protective of all the public and private interests involved.

The CHAIRMAN. The hearings on the Niagara Falls power bills are now closed.

Congressman Smith desires to present resolutions by the Board of Trade of Niagara Falls, which the reporter will incorporate in the minutes.

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BOARD OF TRADE OF NIAGARA FALLS, N. Y.,  
January 25, 1912.

HON. CHAS. B. SMITH, *Congressman*,  
Washington, D. C.

SIR: Inclosed resolutions adopted at a general meeting of the board of trade, held Tuesday, January 23, 1912.

Yours, respectfully,

CHARLES WOODWARD,  
*Secretary*.

*Resolved*, That the board of trade of the city of Niagara Falls, N. Y., in meeting assembled, hereby favors an amendment to the Burton Act, which will allow the diversion of an additional 4,400 cubic feet of water per second from the Niagara River for power purposes.

*Resolved*, That if such additional diversion be allowed by Congress, the city of Niagara Falls make such arrangements to be represented before the officer or body having power to grant permits for diversion of such additional 4,400 cubic feet of water, to protect the rights and interests of the city of Niagara Falls in respect thereto, and to obtain such determinations as shall be for the benefit of the whole city.

*Resolved*, That a copy of this resolution be sent to the Member of Congress from this district for presentation to the proper committee in Congress having the matter under consideration.

CHARLES WOODWARD,  
*Secretary*.

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STATE OF NEW YORK, PUBLIC SERVICE COMMISSION, SECOND DISTRICT,  
Albany, March 15, 1911.

MR. FRANK C. PERKINS, *Consulting Engineer*,  
Erie County Bank Building, Buffalo, N. Y.

DEAR SIR: Below please find data asked for per your postal card of January 21, 1911:

*Cataract Power & Conduitt Co.*—Power generated, none. Power purchased, 219,165,196 k. w. h. Gross price k. w. h. purchased, \$759,829.96. K. w. h. delivered to private consumers, 70,380,534; also 113,177,447 k. w. h. sold to railroad and other corporations for which a gross price of \$694,083.38 is received. Revenue from k. w. h. delivered to private consumers, \$628,116.90. Maximum load kilowatts, 48,170; date when carried, December 6, 1910. Dividends, \$150,000; four dividends during year, one of 3 per cent, three of 1½ per cent

on \$2,000,000 par value of stock. Number of meters connected, 612. Number municipal arc lamps, 347; incandescent lamps used for municipal lighting purposes, k. w. h., 1,845. Revenue, municipal, \$179.23. Municipal heat and power, k. w. h., 19,247,500. Revenue from municipal heat and power, \$33,521.85.

**Buffalo General Electric Co.**—Power generated, none. Power purchased, 39,653,140 k. w. h. Power purchased from the Cataract Power & Conduit Co., 38,521,720; and Niagara, Lockport & Ontario Power Co., 1,131,420. Gross price k. w. h. purchased, \$312,430.97. K. w. h. delivered to private consumers, 18,377,047. Two hundred and thirty-three thousand one hundred and forty-four k. w. h. sold for commercial flat rate lighting which is not included in this item, the net revenue from which is \$13,849.53. Revenue from k. w. h. to private consumers, \$348,509.12. Maximum load kilowatts, 9,430. Date when carried, November 30, 1910. Dividends, \$222,440. Four dividends during year of 1½ per cent on \$3,724,000 par value of stock. Number of meters connected, 9,258. Number municipal arc lamps, 3,680; also 440 incandescent lamps used for municipal lighting purposes. K. w. h. municipal purposes, 5,586,497; includes 69,928 k. w. h. incandescent street lighting, 189,702 municipal building lighting, 47,758 municipal heat and power. Revenue municipal, \$214,517.41. Municipal heat and power k. w. h., 47,758. Revenue from municipal heat and power, \$2,724.24.

**Niagara Falls Power Co.**—Power generated, 484,599,431. Power purchased, 99,928,778 k. w. h. Gross price k. w. h. purchased, \$229,836.18. K. w. h. delivered to private consumers, none; 551,748,383 k. w. h. sold commercial, railroad, and other corporations for which a gross price of \$1,486,935.40 is received. Revenue from k. w. h. delivered to private consumers, none. Maximum load kilowatts, 62,200; date when carried, December 5, 1910. Dividends, \$335,000; four dividends during year at 2 per cent on \$4,197,500 par value of stock. Number of meters connected, not given. Number of municipal arc lamps, none. K. w. h. municipal purposes, none. Revenue municipal, none. Municipal heat and power, k. w. h., none. Revenue from municipal heat and power, none.

Yours, very truly,

J. S. KENNEDY, *Secretary.*

STATE OF NEW YORK,  
PUBLIC SERVICE COMMISSION, SECOND DISTRICT,  
*Albany, March 19, 1910.*

Mr. FRANK C. PERKINS, *Consulting Engineer.*  
*Erie County Bank Building, Buffalo, N. Y.*

DEAR SIR: Answering your inquiry of the 14th instant, the report of the Buffalo General Electric Co. for the year 1909 shows as follows: Purchased from the Cataract Power & Conduit Co., 31,698,320 k. w. h., at a gross price of \$259,337.25; purchased from Niagara, Lockport & Ontario Power Co., 732,780 k. w. h., at a gross price of \$13,864.09. Total number of k. w. h. delivered to consumers during the year, 21,374,324; revenue therefrom, \$964,799.54; miscellaneous revenues, \$2,655.99. Maximum load, 8,300 kilowatts, December 23. Dividends during the year, four dividends, each of 1½ per cent on \$3,724,000 par value of stock. Increase in surplus during the year \$27,573.49. Number of meters in Buffalo, 7,341; Lackawanna, 199; Blasdell, 11. Connected load, kilowatts: Buffalo, 22,622; Lackawanna, 257; Blasdell, 91.

**Cataract Power & Conduit Co.**—K. w. h. purchased from Canadian Power Co., Niagara Falls Power Co., and Toronto Power Co., 181,531,061, for a total gross price of \$724,649.06. Total number of kilowatts sold, 177,296,138, for a revenue of \$1,210,880.33; miscellaneous revenue, \$1,049.76; total revenues, \$1,211,930.09. Maximum peak load not shown. Total dividends during the year, two dividends of 3 per cent on \$2,000,000 stock. Increase in surplus during the year, \$40,994.22. Number of meters, 530; connected load, 80,000 e. h. p. Number of consumers, 454.

**Niagara Falls Power Co.**—K. w. h. generated, 417,256,803; purchased, 77,765,292. Sold, 458,431,883, for a revenue of \$1,290,912.66, and miscellaneous revenues of \$74,179.95, making total revenues for the year, \$1,365,092.61. Maximum load, 60,000 kilowatts, December 10. No dividends. Decrease in surplus during the year, \$239,646.69. Number of meters, 112; connected load, 70,870 kilowatts. Number of consumers, 29.

Regarding your inquiry, "Total kilowatts capacity, generated or produced," I am unable to interpret this inquiry.

Very respectfully,

W. J. MEYERS,  
*Statistician.*

ARGUMENT OF THE HON. FRANCIS LYNDE STETSON BEFORE THE  
SECRETARY OF WAR.

MR. SECRETARY: By your invitation, the representatives of the Niagara Falls Power Co. and the Canadian Niagara Co. now appear before you upon their application for your permit to transmit from Canada and to receive in the United States electric power generated in Canada from the works of the Canadian Niagara Co., to an amount not less than that indicated in the report of your engineer, Capt. C. W. Kutz, enlarged in accordance with the views of the American members of the International Waterways Commission.

Under the act of June 29, 1906, adopted upon the report of the House Committee on Rivers and Harbors, presented by its chairman, Judge Burton, after protracted hearings and personal inspection, you were authorized to grant permits in the aggregate for the transmission of 350,000 electric horsepower from Canada. Of this amount the transmission of 190,000 electric horsepower is to be permitted after practical experience shall have demonstrated the effect upon Niagara Falls of transmitting 160,000 electric horsepower from the Canadian side. Your engineer, Capt. Kutz, and the three commissioners, who at the hearing before you on July 12, 1906, were justly termed by Mr. McFarland,<sup>1</sup> "the very able governmental commission which has looked into the physical details of this question,"<sup>2</sup> have investigated the conditions and have submitted you their reports that your discretion may be exercised to the extent of now permitting transmission of 160,000 electric horsepower, with conditional enlargement as stated by the American commissioners.

Their calm, lucid, and impartial report upon this point has stirred to opposition Mr. J. Horace McFarland, president and spokesman of the American Civic Federation, some of whose extraordinary statements may well be considered at the outset, for if well founded the allegations of Mr. McFarland would preclude any transmission at all.

At the hearing in July, Mr. McFarland referred to himself as a "white black-berry," and as the "lone representative of the people." Since then and since the reports of your advisory officers he has "gone to the country" with printed broadsides for the newspapers, intended to induce letters and telegrams to you to overrule your advisers, and making allegations so violent and so inaccurate, that, as I suggested in July the source from which they emanate can not be regarded as strictly responsible; that is, as feeling bound to substantiate them. This charge is material and proper for present consideration, for, if well founded, it must relieve you from the necessity of giving serious attention to his heated appeal, or to "the flood of personal letters" thereby invited. Of course, the burden is upon me to support this charge of irresponsible and inaccurate assertion; for at the July hearing, referring to Mr. McFarland's extreme statements, I said that if the effect upon Niagara were to be as serious as he anticipates, I should be with him entirely.

Therefore, it is due to the gravity of the interests involved that I should indicate some of the important errors of Mr. McFarland doing grave injustice to men not less honest than he.

SOME MISSTATEMENTS BY MR. M'FARLAND.

1. Mr. McFarland states that the Canadians already have cut off 500 feet of the Horseshoe Falls "to accommodate a power company," and again "to give a better chance to one of the power companies."

This statement is absolutely untrue, and upon July 12, 1906, Mr. McFarland was informed of that which is the truth, namely, that whatever was done in this particular was done by the order of the commissioners of the Queen Victoria Niagara Falls Park not for the purposes of any power company but for

<sup>1</sup> In his excess of zeal in a cause which in its intention is highly meritorious, Mr. McFarland has made attacks upon our companies so unfounded as to compel me to dissect and to refute them. This necessarily gives to my remarks more of a personal turn than I desire, for I understand that Mr. McFarland has been and is a useful public citizen. I have nothing to say in derogation of his character or his motives, though in this discussion, like the cowboy in the Western mining camp, he does seem to be "uncommon free with his gun."

<sup>2</sup> These are the same gentlemen to whom in his third emergency call, dated November 19, Mr. McFarland refers, as "the corporation-favoring International Waterways Commission." No one now or hereafter, not even upon careful investigation of this question, can venture to differ from Mr. McFarland's decisions, without attracting his virulent comment.

the improvement of the Queen Victoria Park in the exercise of the exclusive jurisdiction of the commissioners.

This is stated by the commissioners as follows in their seventeenth annual report for the year 1902, before any Canadian power companies were in operation :

"At Table Rock the recession of the Falls has of late years bared a large area of the river bed, and advantage has been taken of the surplus material from the works in progress to reclaim all this area and provide a new and most attractive point from which to view the Falls and gorge" (p. 45).

And again (at p. 8) :

"The filling in of the shore line above the Falls by excavated material from the tunnels will increase the park area very considerably and will permit the roads and walks being constructed on the margin of the river, which will greatly improve the views of the upper rapids and at the same time cover the foreshore, which in some places has become exposed by the recession of the waters owing to the breaking away of the cataract."

The arrangement here referred to by the commissioners was embodied in a plan delivered by the commissioners to the contractor, Mr. A. C. Douglass (now mayor-elect of Niagara Falls), who complied with such plans because of the instructions of the commissioners and not for any purpose or advantage of any power company.

On July 12, 1906, when the Secretary was at Niagara, the facts as last given were stated to Mr. McFarland by Mr. Douglass in the presence of Mr. P. P. Barton, general manager of the Niagara Falls Power Co. It was pointed out that the filling did not in any way benefit any power company and was not desired by any power company, and that the small streams cut off were insignificant from the scenic standpoint.

As reported from the Canadian commission, the facts are as follows: After the fall of Table Rock and the consequent erosion of the concavity of the Horseshoe Falls the current sought and deepened the central channel, exposing the higher margin of the Canadian shore. To reclaim this exposed margin was the continuous purpose of the Canadian commissioners from their appointment in 1887, prior to any power development. In pursuance of this purpose they have caused to be reclaimed an area which, measured along the crest line of the Horseshoe Falls, extends 400 feet, but at right angles to the original shore line only 175 feet, and this reclamation they deem to be for the public benefit. Of the 400 feet reclaimed 150 feet had been reclaimed prior to 1895.

If, as usual, Mr. McFarland doubted the truth of any statement favorable to the power companies, it would have been easy for him to ascertain the facts from the Canadian commissioners. But he has chosen to make a derogatory and untrue assertion, notwithstanding forewarning of its falsity, and thus has invited the renewal of the charge of irresponsibility, which now I must repeat.

Since the foregoing was written the Canadian Niagara Power Co. has received from the Queen Victoria Niagara Falls Park commissioners the following letter, finally and utterly destroying the basis of Mr. McFarland's twice-repeated libelous charge :

QUEEN VICTORIA NIAGARA FALLS PARK COMMISSIONERS,  
Toronto, November 20, 1906.

CANADIAN NIAGARA POWER CO.,  
Niagara Falls, Ontario.

DEAR SIRS: Referring to the following statement contained in the pamphlet entitled "Imminent Danger to Niagara Falls," viz, "they have already cut off 500 feet of it" [Horseshoe Falls] "to accommodate a power company!" I have only to state that the instruction to your company to deposit the waste material from tunnels, and so forth, on the margin of the river was for the purpose of improving the scenic conditions of the river shore. Owing to the continued falling away of enormous masses of rock at what might be called the apex of the Horseshoe Falls, drawing the water from the shore line into the center of the river, the river on the Canadian shore had become dry, exposing large areas of unsightly boulders and ragged rocks.

The commissioners, therefore, thought it well to take advantage of the work of excavation which was then in progress, in order to remedy these unsightly conditions brought about by the water receding from the shore line.

So far from the commissioners being under the dictation of your company or of any other power company in this particular, they acted according to their best judgment, and they believe they have succeeded in enhancing the æsthetic

conditions of the Horseshoe Falls, as well as of the shore line approaches thereto.

Believe me, yours, truly,

J. W. LANGMUIR, *Chairman.*

2. As to the amount of water likely to be withdrawn, Mr. McFarland makes the following extraordinary misstatements:<sup>1</sup>

(a) "A recent examination of the tailraces and channels intended to turn the water into the Niagara River after it has been used in the great turbine wheels of the existing Canadian plants, shows that their aggregate section is 68 by 72 feet. The velocity of water now beginning to rush through these vast channels is at least five times that of a rapidly flowing river. Is it likely the volume of water which will pass at Niagara speed through a channel as wide as a city boulevard and as deep as a six-story office building will not make any difference in the volume of the Falls?"

The aggregate section of 68 by 72 feet given by Mr. McFarland would be a prism of 4,896 square feet, which is about three times the aggregate of the actual cross sections of the tailraces of the three Canadian developments, whose measurements are as follows:

	Square feet.
C. N. P. Co. tunnel, cross section.....	405
Electrical Development Co. cross section, approximately.....	514
Ontario Power Co. tailrace, approximately.....	720
Total .....	1,639

(b) Mr. McFarland further states:

"Another computation shows that the water it is proposed to abstract on the Canadian side alone would make a rapidly flowing river 1,685 feet wide and 18 feet deep"—

and in another place—

"a rapidly running river nearly half a mile wide and 18 feet deep."

The engineers of the Niagara Falls Power Co. advise me that this statement is even more wide of the truth than those already dissipated.

The amount of water on both sides which under the temporary permits of the Secretary, and the report of Capt. Kutz, it is proposed now to abstract would be 28,100 feet per second.<sup>2</sup> This volume of water, flowing out of a river 18 feet deep and 1,685 feet wide, would make a "rapidly flowing river" only if this term, borrowed from Mr. McFarland, could be applied to a stream running at the rate of less than half a mile an hour, which may be compared with the water in the Schoelkopf Canal that runs about 5 feet per second or approximately 4 miles an hour.

(c) Mr. McFarland endeavors to heighten the peril by stating that—

"The volume of water thus withdrawn will more than equal the present average outflow at the mouth of the Hudson, Delaware, and James Rivers combined."

But these are tidal rivers, and the outflow at their mouths is inconstant, and is not susceptible of comparison with the current of Niagara, which at all times is a rapidly flowing stream. It is possible that because of the slowness of current, all of these three tidal rivers in their entire volume at their mouths would be inadequate to the regular production of 350,000 horsepower; but we repeat, in the present case, terms of horsepower are not suitable terms for comparison. As already observed, Mr. McFarland himself has stated the aggregate section of the water which he charges is to be withdrawn, viz, a prism of 68 by 72 feet, this being three times the prism actually contemplated. But his imagined prism would be but an insignificant fraction of the prism of the mouth of any one of the three rivers named by him, much less of the three rivers in combination.

(d) Mr. McFarland scoffs at the contention that the withdrawal of the amount reported by your advisers will have no appreciable effect upon the scenic grandeur of Niagara Falls, and cites—

<sup>1</sup> In a published interview the eminent physician and citizen of Buffalo, Dr. M. D. Mann, refers to these statements as well as other statements of Mr. McFarland, deprecating any doubt of their truth. If, as now shown, the absolute error of these statements had been known to Dr. Mann and to the many others who have been misled thereby, they could not have expressed themselves as they have done.

<sup>2</sup> Present permits, American side, 8,600 + 4,000. Mr. McFarland's statement for 180,000 horsepower. Canadian side, 13,500.

"the sober finding of the American members of the International Waterways Commission, that 'the glory of Niagara Falls lies in its volume of water rather than in its height or in the surrounding scenery.'"

But, as stated by Mr. McFarland in his circular of November 5, this "is the very same body that has recommended to Secretary Taft to permit the admission of 160,000 electric horsepower from the Canadian side." Why should the capacity or the fairness of this body now be questioned?

(e) Mr. McFarland flouts the engineers who insist that no damage will be done to the Falls, and "those who bring the oldest inhabitant of Niagara to testify that he can not see any difference." He prefers to rely upon "recent visitors to the Falls," who "insist that there is already evident a substantial reduction in their glory."

The suggestions of Mr. McFarland as to a present apparent depletion of Niagara must have been refuted by the personal observation of the Secretary upon the day of the hearing at Niagara, July 12, 1906, when the works upon the American side were in full operation. I am not the "oldest inhabitant"; but after nearly 20 years of continuous observation of the volume and flow at Niagara Falls, I am prepared to maintain, and I challenge successful denial of the proposition, that upon that day there was no diminution of the volume or flow of the Niagara River which was susceptible of observation. Neither is there now any appreciable diminution.<sup>1</sup>

This is in accordance also with the testimony of the water gauges, which at least three times a day for more than 15 years have been maintained and examined by the Niagara Falls Power Co. and by the Schoelkopf Co. These observations show not only that there has been no observable depletion of the American Falls, but that there has been no material diminution, even when tested by water gauges. The fact is that the draft upon the American side has resulted in the reestablishment of the régime of the river by contribution from the Canadian side, where the water is deeper. (See Bogart, post.)

It has been suggested by some, though doubted by others, that the additional waterways furnished by the tunnels tend to increase the rapidity of the flow in the river itself and thus to draw more rapidly upon the ample reservoirs of Lake Erie. In its effect upon this reserve the largest proposed diversion would be insignificant. (See Proceedings before the River and Harbor Committee, Prof. Williams, p. 237; contra, Gen. Ernst, p. 237; Brackenridge, p. 204.)

<sup>1</sup> This accords with the view of Mr. C. M. D. Burton, whose highly intelligent and able plea for Niagara's preservation in *Leslie's Weekly* for November 8, though not wholly free from error, is commendable for its purpose to treat the subject fairly. Mr. Burton, in substance, concedes that "the Falls have not suffered perceptibly as yet," and states that "measurements show that the present diversions have lowered the water at the brink a few inches," though he thinks that possible future diversions to the full extent authorized, "may well be subject for apprehension." See, also, the statement below of the Rev. Dr. Hallock.

This was the testimony also of Chairman Dow, of the New York Niagara Reservation, before the Committee on Rivers and Harbors (Report of hearings, p. 170):

"Mr. LAWRENCE. Did I not understand you to say that you could not observe any diminution?"

"Mr. DOW. I can not define it by the eye.

"Mr. LAWRENCE. How could you detect it?"

"Mr. DOW. This report would show the difference.

"Mr. LAWRENCE. As a scenic spectacle, what has been the effect?"

"Mr. DOW. Very little.

"Mr. LAWRENCE. So that if there has been any marring of the scenic effect, it has been, as Mr. McFarland says, due to the erection of structures?"

"Mr. BEDE. You can not detect it by sound either, can you?"

"Mr. DOW. No, sir. It is the fear of the future development that brings us here—what may be done. We are looking after this tremendous diversion."

From this it appears that after 131,000 horsepower has been taken from the American side, the scenic effect is not visible even to the chairman of the New York Niagara Reservation. This impressive fact becomes especially important in the consideration of the probable effect upon the Horseshoe Falls, over which, as Mr. Dow testified, there is a flow which in volume is nine times greater than that of the American Falls. It has been and is generally recognized that the draft on the Canadian side is so far below the division of the river at Goat Island that the draft proposed on the Canadian side would not sensibly affect the American Falls.

This was the basis of my oral argument, addressed to the Secretary of War on November 26, that—

"This leads me to the conclusion, and I hope you may be led to the conclusion from an observation of the conditions, that it is practically demonstrated that 131,000 horsepower produces no appreciable diminution of the American Falls; and inferentially, that 350,000 horsepower taken from the Canadian Falls, which is from six to ten times the capacity of the American Falls, and which draft, as stated by Prof. Clarke this morning, would not affect the American Falls—I say that the inference which you are permitted to draw, and I believe you will draw, is that the withdrawal of 350,000 horsepower would not affect the Canadian Falls any more than the withdrawal of 131,000 horsepower has affected the American Falls, and which is not appreciable."

3. Mr. McFarland permits himself to indulge in the following insinuation, which is unworthy, and in its necessary implication is absolutely false. He says:

"It is reported that they are ready to deceive the authorities, for one of their engineers unwittingly disclosed the fact last July that preparations had been made to bring in 40,000 horsepower and to expend it or waste it through a water rheostat, in order that they might claim and show by instrument that they are actually transmitting that enormous amount of power."

The reference here is to the Canadian Niagara Power Co., which I represent. I appeal to the personal experience of the Secretary of War, or his engineer, Capt. Kutz, and of the American members of the International Waterways Commission whether the conduct and bearing of the Canadian Niagara Power Co. and its officers have not been such as absolutely to refute the suggestion that it has been "ready to deceive the authorities," even though it were silly enough to wish so to do. All of its works and records have been thrown open fully and cheerfully to all of the authorities. It would have been futile, as it would have been base, for the company to make any false pretense that it was otherwise disposing of an amount of power that it was carrying only to waste in a water rheostat. Any such false pretense could not have survived inspection for five minutes.

However, it is true, and it was perfectly legitimate, that upon the introduction of the Burton bill it was considered whether, in order to demonstrate the actual producing and carrying capacity of its Canadian works and conduit, as actually installed, and not to deceive, this company should not carry to the American side, not 40,000 horsepower, but 16,000 horsepower additional to the 16,000 stated by me at the July hearing.

When, Mr. Secretary, at the July hearing you asked me how much power we were carrying to the American side, I answered 16,000 horsepower. I did not say 32,000 horsepower or 40,000 horsepower. That was the first time the question was raised. The condition was necessarily obvious to the authorities; and how could we attempt to deceive the authorities? The project of transmitting 32,000 horsepower was considered, although because of delays in the completion of its new transmission line (now in operation) it was not then prepared usefully to employ the power. This being so, the actual capacity of the generators and conduits as then installed could have been demonstrated practically only by carrying the power into a water rheostat, for no other disposition would then have been practicable. There was no secrecy about this proceeding, and the prominent location of the buildings would make any such preparations a matter of common knowledge as well as the obvious intent. The facts were always accessible to every one, including Mr. McFarland, and there would have been no necessity for misstatement, either by the company or by Mr. McFarland, either as to figures or as to motives. But the idea never advanced beyond preparation. It is not strange that the distortion of such a perfectly proper proceeding should be introduced by the words, "It is reported that."

4. Mr. McFarland states that at the hearing at Niagara Falls on July 12 all of the Canadian power companies "agreed on one point, which was that the American public was very foolish in interfering with their beneficent desires to produce power at its expense."

I appeal to the record, as well as to the memory of the Secretary, for the refutation of this statement, certainly so far as I am concerned.

Upon that occasion I began my remarks by stating that I believed, and should give my reasons for believing, that the impairment of Niagara would not be so serious as anticipated by Mr. McFarland; and that if it were to be as serious as anticipated by him I should be with him entirely. (Record, p. 21.)

And now I repeat as firmly and comprehensively as I can that I have nothing but respect for the sincere men and women who by appeals, sometimes as incendiary and erroneous as those of Mr. McFarland and sometimes more temperate but not founded on investigation, have been stirred to anxiety lest the greatest natural wonder of northeastern America is to be destroyed or impaired. This anxiety is praiseworthy, and, did I believe the peril were real, I should stand with those who feel and express this anxiety. If I believed that the pioneer companies I represent would have produced any such result, I would cheerfully forego every penny of possible profit rather than further the enterprise. But I do not so believe, nor after their exhaustive investigations did Judge Burton or his committee so believe, for otherwise they would not have reported the bill which invests you with your discretionary powers up to the limit fixed by the law under which we now are proceeding.

The question is not, as suggested by Mr. McFarland, one as to the folly of the American people, but is one of fact—"Will or will not the Falls of Niagara be affected appreciably by the diversion or the transmission of the waters to the extent recommended by the American members of the International Waterways Commission?" This is the question which to the extent of 350,000 horsepower from the Canadian Falls Congress decided to leave open for determination by you, and it is the question upon which you have chosen to take capable and professional advice from your captain of engineers and the American commissioners. It is the question also concerning which the advice of these commissioners as to the aggregate quantities that may be withdrawn is the basis of our appearance before you to-day.

It is an insult not only to the companies whose position he belies, but also to yourself, that Mr. McFarland should have issued the misstatements of which he has been guilty. He has advised the American people that—

"Resolutions and petitions have little force, but a flood of personal letters will be effective. This flood should begin to drop in upon Secretary Taft at once and continue until November 15."<sup>1</sup>

A "flood of personal letters," induced by such a cloud-compelling appeal, can have little weight with the Secretary, not even though the flood were to equal "the combined outflow at their mouths of the Susquehanna, Potomac, Hudson, Delaware, and James Rivers." This is a case in which apparently Mr. McFarland has proceeded upon the second line of the Lincolnian canon, that you "may fool all of the people some of the time."

Disregarding the statutory regulation of the Niagara Falls Power Co., which at its own suggestion limited its rights to 200,000 horsepower, Mr. McFarland states that the power-developing companies were perfectly satisfied to have all the water they wanted for nothing from the State of New York—and this in the face also of the fact that, as has been decided by the courts, the power companies upon the American side, being the riparian owners, received from the State of New York no right in Niagara waters to which they were not justly entitled by virtue of their riparian rights. Neither the State of New York nor the United States were the owners of the running waters as against the riparian owners (*Niagara Falls v. Smith*, 70 App. Div., 543; 175 N. Y., 469; see also *Sweet v. Syracuse*, 129 N. Y., 316-335; *Niagara County, etc., Co. v. College Heights Co.*, 111 App. Div., 770.)

5. Mr. McFarland states that—

"Not content with getting free water from the United States<sup>2</sup> to produce profit-bearing power, the Niagara Falls power companies have introduced considerable water into their stock, it is said, which is free to those inside, but expensive to the public."

This statement can refer to only two companies, the Schoelkopf company, which has a stock of only \$500,000, of which no part has ever been sold to the public, and the Niagara Falls Power Co., which has a capital stock of about \$4,000,000, which has never sold above 80 cents on the dollar, and which in the sixteenth year of its issue sells for only 50 cents on the dollar, although in the opinion of the company it represents an investment fully equal to the par amount of the stock.

Mr. McFarland refers to the greed of these companies. The extent of that greed may be indicated by the fact stated by me at the July hearing, that for 15 years the Niagara Falls Power Co. has been contented to continue with a cash investment of over \$20,000,000, receiving only ordinary interest upon the

<sup>1</sup> In his third emergency call, dated Nov. 19, Mr. McFarland reproduces his metaphor. A literal response will inundate the war office until it becomes a bureau of rivers and harbors! He says:

"This second postponement gives further opportunity to strengthen the Niagara flood of protest and appeal which is being turned toward the one man in America who can halt the commercial assault upon our greatest scenic glory."

<sup>2</sup> This is an error. No company has yet got free water from the United States. Under the law (see authorities above recited), as against the Niagara Falls Power Co. and the Schoelkopf company, riparian owners, neither the United States nor the State of New York owned the water of the river. The State of New York did own the lands under water, which it sold to these upland owners upon the same public terms as to any and all other owners of uplands. The same critics who now assert that the State of New York, which without aid from the United States has paid out millions to preserve the Falls, is without jurisdiction to license power companies, in the same breath condemn the riparian companies for making no payment to the State. One answer is that, unlike the Province of Ontario, the State of New York neither sold or leased any upland to these companies whose canals and tunnels were entirely on their own riparian uplands outside of the State reservation.



cash investment represented by its bonds, and without a dollar of dividend upon its very moderate stock, in which alone could be found any opportunity for real profit. A corporation whose activities and energies are directed to, and satisfied by, the return of ordinary interest, can not justly be accused of greed.

6. Mr. McFarland refers to a newspaper publication of a plan of merger of the four power companies of Niagara Falls, so as to create a monopoly, and asks: "Should the United States protect this potential monopoly?"

The suggestion of an intended monopoly is absolutely untrue in fact. Neither the Niagara Falls Power Co. nor its subsidiary, the Canadian Niagara Co., has any present intention of entering into a combination with any company. Against any monopoly, though intended, sufficient protection would be afforded by the provisions of each of their charters.

7. Mr. McFarland indiscriminately assails all of the power companies, irrespective of the fact upon which I dwelt at the July hearing—that the two pioneer companies, the Niagara Falls Power Co. and the Schoelkopf company, were absolutely immune against any charge that their operations would or could appreciably diminish the volume of Niagara Falls.

This fact was the subject of examination and final report by the committee of the New York Constitutional Convention of 1894; the report, upon page 11, stating—

"Two of them" (that is, the Niagara Falls Power Co. and the Schoelkopf company) "have expended large sums of money, and are now operating their respective plants, and the amount of water which they take will not do any appreciable injury to the Falls."

At the July hearing, in answer to my question as to his view of the effect of the diversion by the Niagara Falls Power Co., Gen. Ernst replied:

"If you were the only persons concerned, you would probably never have heard all this agitation."

Upon this impressive recognition of our innocence of the charge of injurious assault upon Niagara Falls, I am content to rest.

The report of the engineer, 1910, states that there has been no injury whatever to the American Falls; and that of the injury to the Canadian Falls only an unknown part is due to diversion, the larger part being due to natural causes, the erosion of the crest.

#### THE COMPARATIVE COST OF NIAGARA POWER.

The Niagara Falls Power Co., this pioneer in the development and establishment of great electrical central power houses and lines of transmission, has conferred an inestimable benefit on mankind, and in an especial degree upon the Niagara frontier, to which it is now delivering more than 100,000 horsepower at prices which, though misrepresented and ridiculed by Mr. McFarland, are readily accepted by hundreds of users, and this without compulsion; for if the Niagara power were not more to their advantage than steam power developed from coal, they would use steam power.

The Niagara Falls Power Co. has published its schedule for standard 10-hour meter power at a rate which offers a maximum use of 100 horsepower and an average use of 75 horsepower for a month of 250 hours, at an aggregate price of \$144.17. This compares with the following reported charges in six important northern cities:

Boston.....	\$937. 50
Philadelphia.....	839. 25
New York.....	699. 37
Chicago.....	629. 43
Cleveland.....	559. 50
Rochester.....	419. 62
Niagara Falls.....	144. 17

In the face of such figures, who can doubt the beneficent effect of the operations of the Niagara Falls Power Co. furnishing power at not more than one-fourth of the cost in New York, Chicago, or Cleveland, and at less than one-fifth of the cost in either Boston or Philadelphia?

Mr. McFarland's statement as to the cost of the public lighting in Buffalo, misleading as it is, has nothing to do with the case. Neither the Niagara Falls Power Co. nor its ally, the Cataract Power & Conduit Co., has any relation to or control over the public lighting in Buffalo. They merely sell and deliver electric current to the lighting company, the same as to any other customer over

whom they have no more control than the paper seller has over the imaginations which Mr. McFarland indiscriminately impresses upon his voluminous printed output.

In great numbers, our customers have come to Niagara Falls, which at the beginning of our work was a country village with comparatively few industries, until now it has become a prosperous city, the ninth in the State, in the volume of industrial products approaching \$20,000,000 per annum,<sup>1</sup> and this without appreciable diminution in the apparent volume of Niagara River, and with a steady increase in the number of visitors, not only to the Falls but to our power houses as well. The moderate admission fees charged to such visitors are used for the benefit of employees.

#### THE MARVELOUS ACHIEVEMENT OF THE NIAGARA FALLS POWER CO.

In the year 1899 our continuing achievement was well described by Theodore Roosevelt, then governor of New York, who completed his inspection of our works by writing over his subscription in our Visitors' Book, "A marvel indeed."

How great is the marvel and how splendid the achievement has been eloquently expounded by that inspired seer of both present and future, Mr. H. G. Wells, in the following wonderful words, written without previous knowledge of or inspiration from our companies, and published in the Harper's Weekly of July 21, 1906:

[H. G. Wells on the Niagara Falls Power Co.]

"The dynamos and turbines of the Niagara Falls Power Co., for example, impressed me far more profoundly than the Cave of the Winds; are, indeed, to my mind, greater and more beautiful than that accidental eddying of air beside a downpour. They are will made visible, thought translated into easy and commanding things. They are clean, noiseless, and starkly powerful. All the clatter and tumult of the early age of machinery is past and gone here; there is no smoke, no coal grit, no dirt at all. The wheel pit into which one descends has an almost cloistered quiet about its softly humming turbines. These are altogether noble masses of machinery, huge black slumbering monsters, great sleeping tops that engender irresistible forces in their sleep. They sprang, armed like Minerva, from serene and speculative, foreseeing, and endeavoring brains. First was the word and then these powers. A man goes to and fro quietly in the long clean hall of the dynamos. There is no clangor, no racket. Yet the outer rim of the big generators is spinning at the pace of a hundred thousand miles an hour; the dazzling clean switchboard, with its little handles and levers, is the seat of empire over more power than the strength of a million disciplined, unquestioning men. All these great things are as silent, as wonderfully made, as the heart in a living body, and stouter and stronger than that. \* \* \*

"When I thought that these two huge wheel pits of this company are themselves but a little intimation of what can be done in this way, what will be done in this way, my imagination towered above me. I fell into a daydream of the coming power of men, and how that power may be used by them. \* \* \*

"For surely the greatness of life is still to come: it is not in such accidents as mountains or the sea.' I have seen the splendor of the mountains, sunrise and sunset among them, and the waste immensity of sky and sea. I am not blind, because I can see beyond these glories. To me no other thing is credible than that all the natural beauty in the world is only so much material for the imagination and the mind, so many hints and suggestions for art and creation. Whatever is, is but the lure and symbol toward what can be willed and done. Man lives to make—in the end he must make, for there will be nothing left for him to do.

"And the world he will make—after a thousand years or so.

"I, at least, can forgive the loss of all the accidental, unmeaning beauty that is going for the sake of the beauty of fine order and intention that will come. I believe—passionately, as a doubting lover believes in his mistress—in the future of mankind. And so to me it seems altogether well that all the froth

<sup>1</sup> Bulletin 57 of the Census of Manufactures for 1905, shows the following increases in the value of manufactured output from 1900 to 1905:

Buffalo, from \$126,150,839 to \$172,115,101; Niagara Falls, from \$8,540,184 to \$16,915,786; Lockport, from \$5,352,669 to \$5,807,908; Rochester, from \$59,668,959 to \$82,747,370; Syracuse, from \$26,540,297 to \$34,823,751.

and hurry of Niagara at last, all of it, dying into hungry canals of intake, should rise again in light and power, in ordered and equipped and proved and beautiful humanity, in cities and palaces and the emancipated souls and hearts of men \* \* \*."

Mr. Wells is not alone in his belief.

Prof. Walter Frewen Lord, of Durham College and of the University of Cambridge, has expressed himself as follows, as appears in the *Toronto Mail and Empire*, upon December 4, 1906:

"I went over the Niagara power plant at the Falls the other day. It was a revelation to me. The cataract was wonderful, of course, but it struck me that the work of man in harnessing it was far more wonderful. It seemed to me the greatest thing that was ever attempted—the greatest thing on earth."

#### THE TESTIMONY OF THE REV. J. N. HALLOCK, D. D.

In a recent issue of the *Christian Work and Evangelist*, Dr. Hallock says:

"A new Niagara, 'harnessed' but not hushed, with its beauty unmarred and its torrential fury undiminished, now greets the astonished eyes of pilgrims to this picturesque region. The hand of the engineer has left the mighty cataract untouched, while adding to the attractiveness of nature's greatest wonder. Niagara is practically just as it was 10 or 20 years ago, impressive in its combination of picturesque beauty and awe-inspiring grandeur. The rapids and whirlpool still excite the admiring wonderment of men. But there is much more than the Falls and the scenic beauties of the river to interest and charm those who visit this New World Mecca.

"I am not sure but that the popular apprehension regarding the possible destruction of the Falls by the power companies has increased the tide of travel in this direction this summer. Thousands of persons no doubt actually believed they were gazing upon the cataract for the last time. Natural Niagara is still a spectacle of beauty and power; industrial Niagara is a wonderful demonstration of man's mastery over the forces of nature. The works of the engineer which use the waters of Niagara River to drive the wheels of industry are even more spectacular than the cataract itself. \* \* \*

"After rushing the turbine wheels beneath these power houses, developing a total of 110,000 horsepower, the water passes through a tunnel a mile long under the city of Niagara Falls, and empties into the lower channel under the first steel bridge. Over 1,000 men were engaged continuously for more than three years in the construction of this tunnel, which called for the removal of more than 300,000 tons of rock and the use of more than 16,000,000 bricks for lining.

"As these power houses represent the first attempts to 'harness' Niagara upon a big scale and embody the latest achievements of electrical engineering, they are visited yearly by thousands and form one of the attractions of the Niagara regions."

"It is in no small measure due to the energy, courage, and perseverance of the directors of the Niagara Falls Power Co. and their associate engineers that Niagara Falls owes its present importance as an industrial center.

"Upon October 4, 1890, ground was broken at Niagara Falls, N. Y., for the initial power installation of the Niagara Falls Power Co. The trial development was for 15,000 horsepower. At that time, three small towns, with a combined population of less than 10,000, were contained within the limits of what is now the city of Niagara Falls. The assessed valuation of all three towns was about \$7,000,000. Five years later the first electrical power from the initial installation was delivered commercially to the Pittsburgh Reduction Co. for the manufacture of aluminum. To-day, 16 years after the breaking of ground for the tunnel, the aggregate amount of power developed by the Niagara Falls Power Co. and its allied interest, the Canadian Niagara Power Co., is about 160,000 horsepower, with additional capacity in course of construction amounting to 60,000 horsepower. Niagara Falls is now a city of almost 30,000 inhabitants, with an assessed valuation amounting to over

<sup>1</sup> The visitors have numbered many thousands, and have included the wise and the great of the earth. William McKinley's last signature, an hour before the fatal shot at Buffalo, was inscribed in our visitors' book. As already observed, Theodore Roosevelt wrote his name there in 1899. Li Hung Chang and Lord Kelvin, foremost in their widely separated spheres, have been followed by vast processions through these power houses and have left their tribute of admiration also upon our books.

\$20,000,000. Such in brief are some of the results accomplished by the men and engineers who harnessed Niagara Falls. Less than 4 per cent of the total flow of water over Niagara Falls has been diverted by these companies, and its beauty and grandeur are unimpaired."

THE NIAGARA FALLS POWER CO. NOT A VANDAL.

We readily accept the characteristically fine statement of President Roosevelt that Niagara Falls should be preserved "in all their beauty and majesty," and we rest confidently on the proposition already announced by us and elaborated at the July hearing that no use of Niagara waters accomplished or proposed by either or both of our two pioneer companies who have spent hundreds of thousands of dollars to secure the most appropriate architectural effects would diminish either the beauty or the majesty of Niagara. If there is to be any such injury, it will be because of the proceedings of later comers, whose plans originated and have developed subsequently to ours. For their actions, if injurious, our two power companies should not suffer. Those later comers undoubtedly will be able to speak for themselves. They can not speak or act to the detriment of our prior rights and the innocuous character of our separate and independent exercise of those prior rights. They have filed briefs apparently in attempted diminution of our rights, although we had not in any way attacked them. We are forced now to an assertion not only of our rights but of our priority of right even if necessary to the entire subordination and possible exclusion of any beneficial enjoyment by them.

Recognition of the Niagara Falls Power Co. as the pioneer in electrical development has been made by many, but by no one more graciously or acceptably than by Gen. Greene, the representative of the Ontario company, in the following language:

"Mr. Stetson claims that his company is the pioneer company in the development of Niagara power. We cheerfully concede this claim. By the brains and the courage of Mr. Stetson and his associates, at a time 10 years ago when the electrical science was far less developed than at present, and the hazard of the enterprises correspondingly greater, the utilization of so much of the power of Niagara as can be taken without in any way detracting from its sphere and glory as a scenic spectacle, was made possible; and I would like to add, if I may, that Mr. Stetson and his friends, as well as those associated with me in the Ontario Power Co., are the true friends of Niagara, and can be more safely trusted to preserve its beauty than the noisy advocates who occupied so much of your time yesterday with misleading statements."

In the same interest, Mr. Cravath followed Gen. Greene, saying:

"While Mr. Stetson has been a pioneer in the generation of power, we have been the pioneer in the long-distance transmission of this power in the State of New York."

Mr. Secretary, this question which is now before you, as I apprehend it, concerning the distribution of the amounts of power to be taken generally by the different companies upon the report of your engineer as to the aggregate amount of power to be taken by companies from the Canadian side and transmitted to the United States, is different from the question of how much power can be taken in the aggregate from the Niagara River on both sides. That is the question that I supposed was discussed and fully discussed before you last July at Niagara, when you had the great advantage of taking the evidence of your own senses as to what was occurring to the river as a whole. But unless I misapprehend the scope and effect of the arguments this morning, and the scope and effect of the arguments and appeals that Mr. McFarland has addressed to the public, that question as to the effect upon the Niagara River as a whole, which we supposed was argued and settled, so far as argument was concerned, last July, now has been brought up again, and thus we are compelled to turn our attention again to that question, as to which I stated at the close of the argument last July we readily acquiesced in the statement and the wisdom of the statement of the Secretary of War that those matters should be referred by him to his master—that is, to the American members of the International Waterways Commission—and to the Board of Engineers of the Army for report; and we have not come here with any idea of contesting that report upon the main subject. But we are forced to take your time for a few minutes concerning that branch of the question, because of the voluminous, and I might say, in some respects, venomous, attacks that have been made upon our positions.

Out of the volumes of speech that were uttered this morning one stood out conspicuous for its knowledge of the facts, and I shall esteem it always a privilege to have heard Prof. Clarke in his address. Such a speech as that, to whatever conclusion it leads, is a speech that fair-minded men should welcome, and concerning which fair discussion can be had; and with the highest respect to the emotions of some of the other gentlemen, I must respectfully say that it is the only speech that I have heard since I have been here that requires consideration.

Last July I took considerable time, as, before this entire debate is closed I shall ask to take some time again, in asking your honor to discriminate between those who are using Niagara power. The power that one man takes from the Niagara River, an amount of power which is absolutely inappreciable in its effects upon the river, does not justly condemn that man or his investment to denunciation or destruction because of that which may be done by others who come after. I have insisted upon that before, and I shall insist upon it again with all the force that I can command. I wish gratefully to acknowledge the contribution to that feature of Prof. Clarke, whom I never saw before, and of whom I never heard before except for his high official position, and whose statement in that particular in recognition of the Niagara Falls Power Co. was as entirely impartial as I believe it was effective.

Prof. Clarke uttered his sentiments with reference to nature, with reference to natural objects, with reference to this particular natural object, in some respects the greatest of all natural objects in the world, and certainly the greatest natural object in northeastern America, and he expressed his interest in it and his love for it. He expressed his desire to perpetuate and to protect it, even, if left to himself, to the extent of going to the very point of prohibiting the use of any water of the Niagara River for industrial purposes; and he seemed to suggest what Gen. Ernst intelligently and acutely observed in his report a year ago, that the characteristic quality of Niagara which impresses the human mind is not in its surrounding scenery; not in the general height of the Falls, but rather in its volume. When Mr. James C. Carter made his great address at the time of the opening of our reservation, for New Yorkers are not all indifferent to the value of the Falls; no other people have submitted to taxation for the preservation of that beauty as they have; we have spent millions in doing it—at the opening of the park resulting from those expenditures, Mr. Carter made the address in which he attempted to define what it was that gratified the human mind in the contemplation of this sublime cataract, and finally he came to the point that it is "the sense of power." That is the quality of the cataract that affects the human mind. It is not beauty alone; it is not height alone; but it is the volume and velocity plus the drop. I do not believe that before these latter days any man ever went there, whether or not he had mechanical ideas, without saying, "What could that do for the use of mankind?"

I will go further. Prof. Clarke justly professes his love for Niagara Falls. Mr. McFarland has written much on the subject, but in what he has written he has seemed to me to express not sentiment, but sentimentality. I have not discovered a thought underlying anything he has written that stirs the heart with the impulse of recognition of beauty or of power as to the words of Mr. Carter, or the acute definition of Gen. Ernst.

I will go further. These gentlemen speak of Niagara and its beauty. I defy anyone in this room or elsewhere to compare with me in my love for the beauty of Niagara. I have studied it for more than 20 years from every point. I know it; I love it. I have listened to its sound. You think you have. You have never heard it. Prof. Lupton, of Leeds, England, asked me one day, "Has Niagara a sound?" I said, "Yes, of course; a mighty sound." He said, "When I went away and looked at my notebook I could not find that I had entered that it had a sound." I said, "I will listen for it." I went there again and listened, and then inquired of a musician. He answered, "Yes, it has a sound, so profound that it has been questioned what would be the length of the organ pipe to produce it."

It is not the thunder that you hear. It is not the thunder of the cataract that Mr. McFarland has pointed out to you. It is a deep diapason, that goes down away under the bubble and rush of the waters, which is the profound note of Niagara. Such is the sound that will control the disposition of the present question as against the bubble and froth and foam, not of those of the great American people who understand the question, but of those who are engaged in the kind of agitation that amounts to little more than the blowing of soap bubbles. Do they

love Niagara? I love it not less than they. I have followed its sound, and I have followed its beauty. I have put my life into it. When Prof. Clarke says that he would be glad to see removed all buildings near the Falls, I appreciate his sentiment, and I go even further than he. I would be willing to give a tenth of all I have in the world, and more, to restore all along Niagara River, from Buffalo to Lewiston the glorious forests that once stood there, as now they stand on Goat Island; on either side of the stream, to restore it in very aspect, in every surrounding, in scenery, in all that will constitute the elements that gratify the lover of landscapes and the glory of nature—following, as many time I have followed, the course of the river from Chippewa Creek to Lewiston, the counterpart of Cole's Voyage of Life; starting in the placid waters of the upper Niagara, with childhood's innocence of danger; rushing through the turbulent rapids, and plunging over the cataract, of youth and early manhood; coursing through the lower rapids in the vigor of full maturity; and, at last, coming out into life's placid finish as the serene river enters the fond and shining embrace of Lake Ontario.

I defy any of these gentlemen to love Niagara River more than I. The love of these who have spoken, in the words of the poet, as compared to mine, "is as moonlight to the sunshine, and as water is to wine"; I repudiate and scorn the idea that any advertising agency or propaganda, however powerful, has a monopoly of the love or of the proclamation of love of Niagara and Niagara Falls.

I maintain, then, that I am entitled to speak as one who knows and loves, and who would respect and perpetuate Niagara Falls in all its glory and in all its sublimity. Is that a mere statement? Is that contested by my acts? Am not I one of these people who would turn that power to commercial use? Am not I one of these people who are resisting the efforts of these others under a perversion of the commerce clause of the United States Constitution to turn the Federal Government into an agency to destroy commercial development?<sup>1</sup> Yes; I am; I am one of those. I think that, within reasonable bounds, to this extent that it is better for mankind the waters of Niagara River should be usefully employed, for we can not now restore the primeval conditions, which I would prefer. I go beyond Prof. Clarke and I say that now, if it were possible to sweep away the villages on both banks, to sweep away all structures from Buffalo to Lewiston, and to reestablish the primeval forests, it would be a sacrilege to permit mere industry to enter such a scene of beauty and sublime power. But the era in which that restoration is possible has passed away.

We are dealing with the era of 1878, when, under the influence of Lord Dufferin, Governor General of Canada, and Lucius Robinson, governor of the State of New York, an agreement was reached that upon each side of the river there should be a park reservation created and maintained severally by the two governments. That movement proceeded to fulfillment, so that in 1888, through the results of taxation, there had been developed and established on the American side that park which now is a reservation maintained, at their own expense, by the people of the State of New York.

On the other side is a park which, as I understand it, was expressly declared should not be made a charge upon the people of the Province of Ontario. So the commissioners of the Queen Victoria Niagara Falls Park, for the creation, preservation, and maintenance of that park, have been obliged to seek revenues from the park itself. Thus, as suggested by Mr. Ely, on the two sides of the river you are dealing with two different questions. On the Canadian side you are dealing almost entirely with the Canadian or Provincial Government.

The commissions that then sat on the two sides of the river undertook in the exercise of their discretion to determine how much property it was desirable should be taken for the preservation of the Falls.

Upon the American side the State of New York had sold the American Falls and Goat Island, under a soldiers' grant of 1812, which came into the possession of your predecessor in that chair, Gen. Peter B. Porter. The American Falls, having been sold to Gen. Porter indirectly and continuing in his family ever since, had to be bought back by the State of New York at a price of over \$600,000, including Goat Island. There had been no such alienation by the Province of Ontario, as far as I understand, though there is a gentleman here who can answer as to that much better than I can.

<sup>1</sup> The principal declared purpose of the Buzton bill is to preserve navigation in the Niagara River where it is impossible of navigation. The only basis in the Constitution of Federal intervention is the commerce clause. This now is invoked to counteract what is termed "commercialism." Thus the commerce clause is turned against itself.

At all events, on each side of the river the commission exercised its jurisdiction and judgment as to how much of the territory surrounding Niagara Falls was necessary for the preservation of that object. They made their decision, they made purchases, and they established their two reservations.

The several governments then passed acts permitting the establishment of power companies. On the American side the act was drafted by my eloquent and esteemed friend Mr. Ely, and therefore he and his associates, all residents of Niagara Falls and largely riparian owners, were constituted a corporation at Niagara, with power to take the waters of Niagara for purposes specified in the New York statute of 1886. That is the origin of the Niagara Falls Power Co., of which I am now speaking, and of which I am a representative, and which has been known as the pioneer in the electrical works. On that particular point I will presently have something further to say.

Under those conditions that company got no property from the State of New York. That company or its originators owned the water front of the Niagara River for 2 miles next above the highest point to which the commissioners deemed it desirable to carry the reservation for the protection of the Falls. Certainly, then, there was no thought of encroaching upon Niagara. That was when the question was fresh. It was the agreement of the State, it was the understanding of the people, and several times it has since been decided that that right of the riparian owner was such as to entitle the corporations thus constituted to draw the water for the purposes of these manufactures, notwithstanding it was a boundary stream and notwithstanding it was a navigable stream; and here I may refer to the decision of Judge Childs in the case of *Smith v. Hydraulic Co.* (70 App. Div., 543), which Mr. Romer knows so well, and which was affirmed by our court of appeals (175 N. Y., 469).

That was the position upon our side of the water—a corporation formed by these gentlemen living at Niagara, in advance of the cooperation or participation of any of those (excepting Mr. W. B. Rankine) now or for many years interested in the Niagara Falls Power Co.

On the Canadian side of the river a similar act was passed; and Mr. Woodruff's statement this morning that all these Canadian companies had been established because their promoters were unable to obtain the power on the side of the United States, was made in violent error as to the facts, certainly so far as concerns the Canadian Niagara Co.

The Canadian concessions began as early as the American; and they began for the reason I have pointed out, that the Canadian commissioners were desirous of obtaining from the use of the park itself, Queen Victoria Niagara Falls Park, the means with which to sustain the park. And thereupon a number of Canadian gentlemen and Englishmen joined under the Canadian act in forming the association which possessed the Canadian right in the park. That had been done entirely anterior to the incursion of the so-called vandals, Mr. D. O. Mills, Mr. J. Pierpont Morgan, Mr. Morris K. Jesup, myself, and others, who now are supposed to be lacking in interest in beauty and art. Before our incursion all this which I have described had been accomplished by law, and these properties were on the market. Somebody was going to develop them; and in 1887 or 1888 began the discussions which, in 1890, resulted in the present group of capitalists acquiring the Niagara Falls Power Co. They never asked anything of the New York Park Commissioners. They had no occasion to ask anything of them. They were not dealing with any property under control of the park commissioners. They were dealing with property entirely above and outside the park.

This proceeding on the American side ran on for two years, when I was approached personally by Col. Albert D. Shaw, formerly a Member of Congress, formerly counsel at Manchester, and formerly consul at Toronto, where he became interested in Canada. He said, "We are going on to build on the Canadian side unless you will buy our right." What did we do? We bought the charter after it had been offered to us. We did not go and seek it. Mr. Woodruff is entirely mistaken in supposing otherwise. We bought that charter, and then what did we do? We let it lie dormant for nine years. If we had not thus purchased, you would have had a Canadian development twice as large years ago. That shows how little eager or pressing we were for the purpose of interfering with the flow of the Niagara.

We come now to the year 1892. On our side we had sunk our shaft in October, 1890. By that date we had made engagements involving millions of money, when that gentleman, who has gone to his rest, and for whom I have a high respect for his many services to the public, and at one time we were

close friends, Mr. Andrew H. Green, who was a watchdog, if there ever was a watchdog, made the seventh annual report for the Niagara Falls Park Commission in which he made statements concerning our proposed work, which I will submit with my remarks.<sup>1</sup> That is the first report that was made about

<sup>1</sup> From Seventh Annual Report (pp. 11-12), Jan. 29, 1891:

"The water power of the river is, however, soon to be made use of in a highly remarkable and original way, under the direction of the Niagara Falls Power Co. This company is composed of prominent business men at Niagara Falls, and from the circular which they have recently issued the following information is derived:

"Beginning at the water level below the Falls a tunnel is to be constructed 29 feet in height by 18 feet in width. It will extend through the solid rock underneath the village to the upper river at a point about 1 mile above the Falls. From this point the tunnel is to continue parallel with the shore of the river  $1\frac{1}{2}$  miles, at an average depth of 160 feet below ground, and about 400 feet distant from the navigable waters of the river, with which it is to be connected by means of surface conduits or canals, through which the water from the river is to enter and be drawn through the shafts and wheel pits in to the great tunnel below. The water will fall upon turbine wheels in the pits, and the power developed thereby will be brought to the surface and delivered to mills or factories, or be transmitted by cable, pneumatic tube, or electricity to other points. The company has purchased about 1,300 acres of land near the reservation. This land will be used for mill sites and dwellings for operatives.

"By the act of incorporation the power granted to the company by the State 'shall not in any sense be construed as permission to cross, intersect, or infringe upon any part of the lands of the State reservation at Niagara.'

"A communication from the State engineer and surveyor concerning the effect upon the American Fall of the diversion of a large amount of water of the river into the proposed tunnel, is appended to this report."

The State engineer's report was as follows:

[Letter from John Bogart, State Engineer and Surveyor, as to the diversion of water near Niagara Falls. State of New York.]

OFFICE OF THE STATE ENGINEER AND SURVEYOR,  
Albany, N. Y., December 1, 1890.

HON. ANDREW H. GREEN,  
*President of the Commissioners of the State Reservation at Niagara.*

DEAR SIR: In accordance with your request I have considered the question of the effect upon the American Falls of the diversion of the water which may be taken by the tunnel now being constructed at Niagara. I have visited the Falls and the point where it is proposed to take the water from the river by a canal, this water afterwards passing through wheel pits to the tunnel referred to. The entrance to the river from this canal is in the navigable part of the river about 1.36 miles above the Falls and 1 mile above the head of Goat Island. It is about half a mile above the entrance to the present hydraulic canal and entirely above the rapids. In my opinion the water taken into a canal at that point will not affect the American Falls specially, because the regular regimen of the river will become reestablished before reaching the head of Goat Island where the currents to the American and to the Horseshoe Falls divide. The effect of the water flowing into this canal will therefore be distributed over the whole river, and will not at all be confined to one section of it.

What this effect will be depends upon the relation of the volume of water taken into this canal to the volume of water flowing in the river.

The amount of flow over the falls has been variously estimated in past years, but in 1868 the volume was measured by the Corps of Engineers of the United States Army in connection with the survey of the Great Lakes. The flow thus determined varies from 273,329 cubic feet per second to 280,757 cubic feet per second. It will, I think, be proper to call this 275,000 cubic feet per second, or 16,500,000 cubic feet per minute.

The amount that can be taken by the tunnel now under construction, if developed to its full capacity, may be 10,000 cubic feet per second.

This is 3.64 per cent of the whole flow.

The actual depth of the water at the crest of the Falls can now be accurately observed, except near the sides of the Falls. The depth varies considerably at different points on the crest. A calculation based upon the observed facts gives 6.22 feet (or 6 feet 2 $\frac{1}{2}$  inches) as an approximate mean depth of water a very short distance (less than 10 feet) above the edge or crest of the Falls when the present mean volume of water is passing over; and 6.07 feet (or 6 feet and four-fifths of an inch) as the depth at the same point when the volume shall be reduced by the amount that can be taken by the tunnel referred to.

Therefore, the depth of water along the whole Falls, just above the crest, may be reduced 1 $\frac{1}{2}$  inches by the diversion of water into the tunnel.

From the operation of a well-known hydraulic law the depth of water directly over the crest will be somewhat less, the velocity being greater; but the decrease of depth at that point, by the diversion of the water, would also be less.

It might be suggested that, as the proposed tunnel may divert 3.64 per cent of the total volume of water, the depth at the Falls would be decreased by the same percentage; that is, 3.64 per cent of 6.22 feet, which would give a decrease of 2.7 inches. But, in fact, the decreased volume will give a decreased velocity, and therefore a greater relative depth at the crest. I therefore think that 1 $\frac{1}{2}$  inches is the probable amount of the mean reduction in depth at the Falls to be caused by the tunnel diversion.

In conclusion, it is my opinion that the amount of water that can be taken through this tunnel will not affect the depth of water flowing over the Falls to an extent that will be visible.

Very respectfully,

JOHN BOGART,  
*State Engineer and Surveyor.*



our work and it was published by way not of condemnation but commendation. In the report of that commission for 1890, submitted to the legislature January 29, 1891, you will find it stated that a highly remarkable and original development of power was about to be made by the prominent business men at Niagara Falls. We understood that Mr. Green and his associates considered this to be an interesting and desirable undertaking. We had no word or suggestion of opposition from them or from anyone else until long after we had committed ourselves publicly to our undertaking, beginning work in October, 1890.

The report for 1891 called attention to the diminution of the water in the Niagara River. You will find it in the Eighth Annual Report, 1891, submitted to the legislature January 29, 1892.<sup>1</sup> I shall submit it with my argument. It called attention to the low water in Niagara River, and to the inception and progress of the works, and it left it to the public to infer whether or not those works were the cause of this low water. That shows the inconsequence of mere impressions. That low water, that now we hear so much about, was commented upon in the report for 1891, which was three years before our tunnel was bored through. That goes to show how even most intimate and forcible observers may be misled. The complaint of the effect upon the Niagara River was made three years before our tunnel was bored through, and from personal observation I may say the water then was lower than it is now—and for a series of years it had been lower.

Secretary TAFT. Was there not a company before yours taking out water?

Mr. STETSON. Pardon me. I speak of electrical—

Secretary TAFT. I understand, but with reference to the withdrawal of water, I mean.

Mr. STETSON. There was one prior to ours.

Secretary TAFT. When did that come?

Mr. STETSON. That company began to draw water, I should say, about 1857. Mr. Romer is here and can state the facts better than I can. How many horsepower do you think you were developing when we came, Mr. Romer?

Mr. ROMER. We began in 1853, not in 1857, I think. At that time there was only one flour mill that was taking power, and that ground about 40 barrels of flour—

Mr. STETSON. I mean when we came in 1889, how much do you suppose you were taking?

Mr. ROMER. Possibly 10,000 horsepower.

Secretary TAFT. I did not know but that the report referred to that.

Mr. STETSON. Oh, no; that had been going on for years, that 10,000 horsepower. Mr. McFarland said this morning that you could not take out the fifth of a glass of water without noticeable loss. But I think that you could take out a fifth of a glass out of the Atlantic Ocean and not notice it. Not even Mr. McFarland could have discovered the loss of 10,000 horsepower out of the Niagara River. That was not the question at all.

Now I have led up to what was actually done by those connected with the pioneer electrical development. Here was no assault by those gentlemen, who have been sarcastically called "our grand dukes," upon the rights of the

<sup>1</sup> From Eighth Annual Report, Jan. 29, 1892, p. 89.

According to statements recently made, there has been a noticeable sinking of the water level of Lake Erie. When this condition exists, the Niagara River necessarily becomes shallower and the volume of water at the Falls diminishes. To the inexperienced eye of the tourist this fact may not be perceptible, but a fact it nevertheless seems to be. The water in the river has during the past year been exceptionally low. In the lower river there has been a fall of several feet, so that it has at times been difficult for the steamboat *Maid of the Mist* to effect a landing at the dock near the foot of the Inclined Railway Building.

The Maid of the Mist Association has petitioned the commissioners for permission to extend its dock, in order that landings may be made at any time. There can be no doubt that this extension is necessary with the river at its present level.

The commissioners are unable to state with any accuracy the cause of the low water. But the commissioners deem it advisable to suggest that the legislature scrutinize with great care and even refuse to enact all bills the object of which is the utilization of the water power of the river above the Falls for manufacturing and other purposes. The Falls themselves, being within the limits of the reservation, are no doubt secure from successful attack, but hardly a session passes without the introduction of one or more bills in the interest of companies organized for the purpose of utilizing the water power of the Niagara River, with the sanction of the legislature.

The commissioners do not mean to imply that these undertakings are necessarily without merit; but, without reflection on past action, it is undeniable that if the legislature shall continue to authorize diversions of the water of the river the volume at the Falls will constantly diminish, and the level of the river, both above and below the Falls, necessarily sink.

public at Niagara. On the American side what was done was projected by citizens of Niagara Falls who owned the riparian lands. On the Canadian side the project was authorized by the Government itself, in order to create and maintain the Canadian Park. That is the origin of the two pioneer corporations for which I speak, and which were endeavoring not to injure but to serve the public in a new and vastly important way.

What then did we do? We made an investigation—all of us did—earnestly, to see whether there could be a possible effect upon the Falls by reason of our taking up this first object on the American side, and we reached the conclusion to which I will refer again hereafter, that there would not. But we let the Canadian side rest in order to demonstrate just what our American action might effect, that we might proceed with safety. We intended, then, and always we intended, to preserve the integrity of the Falls in all their sublimity. Well, the laws having been passed, and we having acquired the rights under the laws which we did not originate, we undertook to have what was the best possible way of making the development, which should be consonant and consistent with the splendid features of this great natural object.

I will not detain your honor at length as to that, but will state simply that we went abroad; that we offered prizes throughout Europe amounting to \$30,000; that personally I made a trip over Europe to look at all the methods of power development; that we consulted Lord Kelvin, Prof. William Cawthorne Unwin, Col. Theodore Turrettini, and Prof. Mascart, of Europe, and Dr. Sellers, of this country, and we adopted their recommendations. When Prof. Clarke said this morning that it was our sin that we did not use but one-third of the power we might have from the water taken by us, I would respectfully reply that it is not our sin. If the loss be such, then it is our terrible misfortune. Distinguished professional gentlemen advised us what to do, and we knew of no better or higher authority in the world. We took their advice and followed it; and if we could get back to that date most gladly would we give Prof. Clarke \$500,000 for the formula that would save that other two-thirds that he thinks that we are losing.<sup>1</sup>

Last summer, at Niagara Falls, Mr. McFarland made an assault indiscriminately, upon the looks of things, and I asked him if he would come to our plant. He went with me, and as he stood in our powerhouse he could not have the face to stand up against that most beautiful installation that had ever been conceived and say that it was such as justified his remarks. No; he said, "You know you are a lawyer, and you know when you are making an argument you can not weaken it by distinctions"—and so he did not distinguish between us. He just said, indiscriminately, that we were all in that condition.

Now, we have advanced through five years from the beginning. On the 1st of June, 1895, our wheels began to turn, and they have been turning continuously and increasingly from that time to this, until, as your honor has observed, we have brought out from the Niagara Falls Power Co.'s electrical plant the output, in round numbers, of 85,000 horsepower; and in the hydraulic plant, converted into horsepower, we have substantially, in round numbers, 8,000 more, making 91,000 horsepower; and I believe, though I am subject to correction, that Mr. Romer's company is producing thirty or forty thousand.

Mr. ROMER. Forty thousand horsepower.

Mr. STETSON. There you have the result, 131,000 horsepower on the American side, which, as you found this morning, is from an eighth to a ninth of the Canadian side in volume.

That is what is in operation now. It is not a question of what is going to be. It is not a question of whether, when you look in the glass to-day you see you are a day younger and more beautiful than you were yesterday. It is a question of what has been the effect of turmoil and tedium and resistance to assaults for about 16 years. That is the phase that to-day is exhibited and illustrated when you look at what now is the effect of the withdrawal of 131,000 horsepower from the American side, which is one-sixth or one-ninth of the Canadian side.

Now, Mr. Secretary, it has been my great privilege and pleasure to listen to your decisions for many years, and sometimes to hope to influence them. Here is a case in which I can not hope to influence your decision, but there

<sup>1</sup> In 1890 no American manufacturer was willing to tender either a turbine or a dynamo of more than 500 horsepower capacity. We led the way first to 5,000 horsepower, and now to 40,000 horsepower turbines and dynamos. This was an experiment involving coverage and resulting in great benefit to mankind.

The story was told fully in Cassier's Magazine, "Niagara Power Number," July, 1895.

has been a mightier advocate than I. That river which, unlike the Niagara flood admitted by Mr. McFarland into some one of these rooms, thunders its cataract over the Falls, spoke to you on the 12th day of July last. You stood in front of it and you looked at it, and if you had ever seen it before I would defy even your acumen to detect a difference in its flow from the time when you first saw it, before there were any mills there at all. I have watched it for 20 years. Our judgment may be biased. That is all right. Charge us with bias; we may be wrong about that. But we insist that our judgment is as good as that of the gentlemen to whom Mr. McFarland has referred when he says "Recent visitors at Niagara Falls report that." Well, we are not "recent visitors at Niagara Falls who report that." We are people who have lived at Niagara Falls. We are the people who have done more in a day to attract attention to Niagara Falls than even the output from Harrisburg. The world has been interested in Niagara Falls as it never was before. The Falls, as Gen. Ernst says, are not conspicuous for their height. The falls in Labrador are higher; the Zambesi Falls in South Africa, and the falls in Norway are higher. Why is it that the people are interested in Niagara Falls? It is because, to use a classic expression, they are "in our midst"; it is because we have invested, and for those who are to come after us we have invested them with human interest, and that I say, with great respect, is quite equal to beauty and to scenic interest. When you have got away from the contrary delusion you realize that what we and others have done has been an addition, a vast addition, to human interest, and I defy you or any man who can speak the language of truth, and keep within the bounds of truth, to say he can detect a difference, visually.

I do not quite understand the report of Gen. Ernst when he says "appreciably affect the Falls." Neither last summer, now, or at any time could I willingly be drawn into any statement which seemed to conflict with Gen. Ernst; but I can not believe that when he says "appreciable," he means appreciated by the eye. When we are talking about scenic grandeur and beauty we refer to the eye only, and referring to that organ, I defy anyone truthfully to say that he can detect the difference between the American Falls as they are to-day, with 131,000 horsepower subtracted, and what they were 30 years ago, when less than 10,000 horsepower was being subtracted.<sup>1</sup>

That, then, leads me to the conclusion—and I hope you may be led to the conclusion from an observation of the conditions—that it is practically demonstrated that the development of 131,000 horsepower produces no appreciable diminution of the American Falls, and, inferentially, that 350,000 horsepower taken from the Canadian side, which is from 6 to 10 times the capacity of the American side and which, as stated by Prof. Clarke this morning, would not affect the American side—I say the inference which you are permitted to draw, and which I believe you will draw, is that the withdrawal of 350,000 horsepower would not affect the Canadian Falls more than the 131,000 horsepower has affected the American Falls.

#### PRIOR AND PREFERENTIAL RIGHT OF CANADIAN NIAGARA CO.

In their report the American commissioners say that Capt. Kutz concludes "that there is no sufficient reason for discrimination between the Canadian companies except their relative ability to command the Canadian market."

In reaching this conclusion Capt. Kutz, as a layman, naturally enough has failed to take into account the consideration to which in equity our Canadian company is entitled as the prior appropriator and licensee of the water. We annex an Appendix A, showing that at all times our prior and superior rights have been recognized by the Queen Victoria Niagara Falls Park Commission, and perforce by each of the other companies now claiming their subordinate rights.

Under the established rules concerning water courses and riparian rights, if by a physical convulsion the waters of the upper Niagara River were to be carried into the American channel so as to leave available for use on the Canadian side only 100,000 horsepower, our company in equity would be entitled to the whole of that power though the two junior lessees were to go dry. Correspondingly, if by the act of law flow of the river available for power transmission to the United States is to be reduced to 160,000 horsepower, then our juniors should first suffer reduction for this purpose to 39,000 horsepower,

<sup>1</sup> This also is the view of Chairman Dow and of Dr. Hallock, quoted at length above.

for they are not entitled to consideration to the detriment of our prior right to 121,000 horsepower for any and all purposes. The three successive rights of the three principal lessees must in equity be reduced, if at all, in the inverse order of alienation by the Canadian authorities. I make no reference to the International Railway Co., whose rights we do not discuss.

Another ground upon which we base our claim to preferential consideration is the comprehensive purpose of the act of Congress of June 20, 1906. The object of this act is to preserve Niagara Falls in their entirety, not the Canadian Falls alone, nor the American Falls alone, but the entire natural wonder for the gratification not of Canada alone or of America alone, but for all mankind. With this generous purpose I heartily sympathize, provided that it shall be accomplished as it can be accomplished with just regard to honest rights in the order of their priorities. In this comprehensive view of the subject it is to be considered that the two companies now represented by me are substantially one and that their developments have been and are mutually interdependent. For this reason we have not resorted to the semblance of a contract between them. Thus considered, it will become evident that the Niagara Falls Power Co. is suffering more than any other company, for it has been forbidden to proceed under its charter right to construct in New York a second tunnel for 100,000 horsepower, for which it has acquired its right of way and has made large expenditures. It is also hindered from proceeding under the charter right of the Canadian Niagara Co. to complete the second half of its wheel pit, already excavated, for the erection of six 11,000 electric horsepower turbines and dynamos. As the greatest sufferers, we submit that nothing should be conceded to our juniors because of their lesser and inferior deprivations.

#### THE ONTARIO CO.'S POSITION.

The Ontario Power Co., in its printed memorandum, has submitted certain claims for special consideration, to which, in our view, it is not entitled.

(a) The claim of the Ontario Co. to special consideration on the ground that it uses the water more economically than any other company is not accepted by Capt. Kutz (p. 13, clause 27). It may not be irrelevant also to suggest that as this economy is due to the construction of a power house directly and conspicuously in front of the Falls, it is unlikely to be regarded as a merit by those who are seeking to protect and preserve the scenic grandeur of Niagara. The construction of this power house directly in Niagara Gorge was the subject of timely and vigorous protest by Mr. Andrew H. Green and his associate commissioners to the Canadian commissioners, as fully considered in their seventeenth report at page 9.

(b) The suggestion that the Ontario Co. is entitled to special consideration because it is paying twice as much rent as any other company is incomplete. It should have been added that for each of its grants each of the three Canadian companies pays the same initial rent of \$15,000. The Ontario Co. has two grants, of which one is upon the Welland River, which it does not now choose to use, but which it is at liberty to use. After the rents, covering 40,000 electric horsepower, each of the three companies is to pay exactly the same rent for all of its power. Upon the sale of 40,000 electric horsepower two of the companies will pay \$37,500 and the Ontario Co. will pay \$47,500. As the Ontario Co. asserts that it has contracted to sell more than 40,000 horsepower it would seem as though now its rental will be not materially more than that of the other two companies.

If the amount of rental is of consequence, the Canadian Niagara Co., which has been paying rent since 1892—eight years longer than any other company—clearly is specially entitled to consideration. These payments up to 1906 are shown as follows by the commissioners' reports (19th, p. 11; 20th, p. 16):

Canadian Niagara Co.....	\$239,577.73
Ontario Power Co.....	140,000.00
Electrical Development Co.....	87,500.00

(d) The plant investment in August, 1906, of the Ontario Co. proper (\$5,542,000) is not greater, but is less than that of the Canadian Niagara Co. (\$6,250,000). (See Capt. Kutz's report, p. 7, clause 7; p. 10, clause 16.)

The additional expenditures by the Ontario Co.'s customer—the Niagara, Lockport & Ontario Co.—are insignificant compared with those of the Canadian Niagara Co.'s principal—the Niagara Falls Power Co.—and its subsidiary companies in Niagara, Tonawanda, and Buffalo, with their four transmission

lines, and the many customers all exhibited to Capt. Kutz. The actual investment on the faith of this development of the Canadian Niagara Co. has been and is more than that of all the other Canadian companies and their subsidiary companies combined.

(e) The prospect of service rendered or to be rendered by the Ontario transmission line is highly colored by hope, as shown by the cold facts arrayed by Capt. Kutz in section 10 of his report.

Proceeding from a present actual delivery of 700 horsepower and a present firm contract for only 14,240 horsepower, the Ontario Co. deludes itself into the plea that it is to be considered on the basis of an actual contract for 90,000 horsepower if not for 180,000 horsepower.

It is notorious that power is used not in sparsely settled country districts but in centers of population. The Ontario transmission line runs through 150 miles of rural territory to reach Syracuse, a city with less than one-third of the population and with only  $\frac{1}{3}$  of the manufactured products of Buffalo, to which, with its contiguous outlying districts, the Niagara Falls Power Co. now is actually supplying 40,000 horsepower with a demand for 5,000 more.<sup>1</sup> We respectfully invite the Ontario Co. to show exactly how much power it is actually supplying in Syracuse or elsewhere, and also how much power it is bound to supply there or elsewhere to any customer other than its subsidiary transmission company, i. e., itself.

#### POWER DELIVERIES BY OUR TWO COMPANIES.

Upon this point of actual delivery of power, it may be well now to exhibit somewhat more clearly than heretofore the necessities of our two combined companies, the Niagara Falls Power Co. and the Canadian Niagara Co.

To the amount of 85,000 horsepower, stated on pages 8 and 14 of the brief of the Niagara, Lockport & Ontario Co., and on page 2 of the brief of the Ontario Co., and stated also on page 11, paragraph 20, in Capt. Kutz's report, as the electrical load of the "combined companies" (The N. F. P. Co. and C. N. P. Co.) must be added, approximately 8,500 horsepower, the amount of the Niagara Falls Power Co.'s hydraulic load delivered to the International Paper Co., and not converted into the form of electricity.

As a matter of fact, Capt. Kutz somewhat underestimated the maximum electrical load of the combined companies. During the winter of 1905-6, it was substantially 90,000 electric horsepower. Adding 8,500 horsepower hydraulic, we have, at that time, a combined load closely approximating 100,000 horsepower. (See Appendix C.)

With the adequate provisions for reserve and for necessary repairs, in practice and under present conditions, the American electrical plant working to its capacity can not be relied upon for 85,000 horsepower.

The printed statement made by the Niagara Falls Power Co., and submitted to Capt. Kutz, under date of July 27, 1906, gives the power contracts of that company in detail, and shows an aggregate of 167,740 horsepower subject to call thereunder on the American side. The originals of these contracts also were all submitted to Capt. Kutz, and those for larger amounts of power were gone over in detail by him and by his associate, Mr. Faust, of the Department of Justice. The printed statement of the same (Niagara Falls Power) company to the Secretary of War, dated July 3, 1906, gives the amount called or in use under each of these contracts. This amount then aggregated 102,550 electric horsepower. Since that time several power consumers have increased or called for additional power in a considerable amount—notably the Niagara Electro-Chemical Co. which is now installing additional electrical apparatus to use up to a maximum of 4,500 electric horsepower; The Pittsburgh Reduc-

<sup>1</sup>As may be seen by reference to Census Bulletin 57 already quoted, the value of manufactured products in 1905 was as follows:

Buffalo .....	\$172, 115, 100	
Niagara .....	16, 915, 786	
		\$189, 030, 886
Rochester .....	82, 747, 370	
Syracuse .....	34, 823, 751	
Lockport .....	5, 807, 908	
		123, 378, 959
		\$12, 409, 845

The lighting and transportation requirements keep pace with the manufacturing conditions.

tion Co. to use up to a maximum of approximately 10,000 horsepower, and the Union Carbide Co. up to 25,000 horsepower. The Cataract Power & Conduit Co., the Buffalo distributing agent of the combined companies, already during the present month has called upon our combined companies to provide at their power houses, a maximum which with the Tonawanda demand will call for 40,000 electric horsepower, and during the month of December will require provision, at the power plants, of not less than 5,000 electric horsepower in addition to the amount last mentioned.

The amount of 25,000 electric horsepower which the Canadian Niagara Co. is transmitting under the provisions of its temporary permit has been barely sufficient to supply the pressing demands of the present use of our combined companies. Except for the fact that on account of unexpected difficulties in construction and in crossing certain properties with its cables, the Canadian company was delayed, the entire amount of the present temporary permit already would have been used in Buffalo alone, in which case the American company would not have been able to supply the present enlarged demand on its own lands in the city of Niagara Falls, N. Y.

It is true, as stated in the memorandum of the Niagara, Lockport & Ontario Co., that our original application for 121,500 horsepower is for an amount which, in the opinion of Capt. Kutz, exceeds by 500 horsepower the present capacity of the plant, which he states "were designed for the production of 121,000 horsepower"; that is, 11 units each of a capacity of 11,000 horsepower. His deduction of one of the units as a spare, so as to put the company on the same basis with the other two Canadian companies, disregards the fact that in the case of our company reserve will be provided by the Niagara Falls Power Co. on the American side; and therefore our original application should have been not for 121,500 horsepower, but for 121,000 horsepower, which, as stated in Capt. Kutz's report, is the ultimate full capacity of our Canadian plant.

When the installation of the electrical machinery above referred to is completed, the combined companies, at times of maximum load, will require the entire available output of both the American and Canadian plants in order to supply the power demands now under contract.

#### THE CLAIMS OF THE TWO TRANSMISSION COMPANIES.

To the separate claims of the two transmission companies, the Niagara, Lockport & Ontario Co. and the Niagara Falls Electrical Transmission Co., we consider it unnecessary to make separate reply, for their claims are merely in support of their several principal companies in Canada.

With reference to the Niagara Falls Electrical Transmission Co., it does not appear that it is legally authorized "both for diversion and transmission" so as to come within the scope of the second section of the act.

#### THE CLAIM OF THE ELECTRICAL DEVELOPMENT CO.

The claim of the Electrical Development Co. for equality of treatment does not seem to us unreasonable if disposed upon the basis of priority of the three companies in the order of their establishment.

In other words, we would not deny that in fairness each of the three companies should be permitted to transmit to the extent of its capacity as developed or really in course of bona fide development prior to congressional action. But if it shall become necessary to limit the exercise of these rights, then, equitably, the discrimination should be inversely in the order of priority.

#### CONCERNING INTERNATIONAL TREATY.

Mr. McFarland rests his two "emergency" calls particularly upon the propositions, first, that congressional legislation will prove ineffectual unless supplemented by an international treaty; and, secondly, that "confidential advices from the State Department at Washington indicate the improbability of success in negotiations with Canada for the treaty unless the United States shows a real desire to preserve the Falls."

Thereupon Mr. McFarland proceeds to make the following statements:

(a) "The United States is now in a position to either save or ruin Niagara Falls. If we freely admit all the electricity the Canadian companies want to send in, we divert the water from the Falls as directly as if we had control of

the Canadian frontier. If the United States denies admission to this power it will not be produced, and the glory of Niagara will continue."

(b) "Insist respectfully that he (Secretary Taft) refuse to admit any power from Canada not now being admitted, because in so refusing he will be preventing the depletion of Niagara."

It is hardly conceivable that the author of these two sentences above quoted could have seriously considered their effect upon an effort to promote an international treaty, which must be written, if at all, with the free will of Canada. How could he, or those who think with him, possibly expect that the friends of Canada would concede a treaty to those who by indirection and through American authorities are virtually proposing in this particular to accomplish the "control of the Canadian frontier"?

The fair disposition of the Canadian authorities is plainly shown in the unanimous conclusion of the members of the International Waterways Commission, both of the United States and of Canada, as embodied in the report of May 3, 1906, transmitted to Congress by President Roosevelt under the date of May 7, 1906. (See pamphlet entitled "Preservation of Niagara Falls, H. R. 18024," p. 283.)

In this report the commission stated that while it was not fully agreed as to the effect of the diversion from Niagara Falls, all were of opinion that more than 36,000 cubic feet per second on the Canadian side of the Niagara River or in the Niagara peninsula, and 18,500 cubic feet per second on the American side of the river, could not be developed without injury to Niagara Falls as a whole. Accordingly the International Commission confined its recommendation to these figures, conceding twice as much draft upon the Canadian side as on the American side, probably because of the greater depth of water at the Horseshoe Falls. But it was stated expressly by the Canadian members that their assent to these conclusions was given only upon the understanding that any treaty or arrangement for the preservation of Niagara Falls should be limited to the term of 25 years, and should also establish certain principles, including the right of each country to an equal share of the diversion of international waters whether navigable or nonnavigable.

In the face of this reasonable declaration, how could anyone imagine that an international treaty would be facilitated by the suggestion that by discriminating against Canadian diversion and importation the United States in this particular may virtually control the Canadian frontier?

We should all concur in the unanimous conclusion of every member of the waterways commission, Canadian as well as American, that "it would be a sacrilege to destroy the scenic effect of Niagara Falls"; but we must recognize also that while Niagara Falls is a wonder, "fair play is a jewel." Such an indirect attempt to control the Canadian output certainly would not lead to the Canadian belief that we were disposed to play fair.

To a considerable extent the Canadian Niagara Co. represents Canadian capital, but to a still larger extent, American capital. Nevertheless, it is a Canadian company, entitled to the protection of its Canadian contract, and cheerfully recognizing and prepared to fulfill its Canadian obligations under that contract. As stated by me at the July hearing, it desires the opportunity to use in the United States all of its power not required to meet the Canadian demands under that contract, to which demands, when received, it will make prompt and cheerful response. The counsel of the Electrical Development Co. of Ontario have misapprehended my statement, when they say that our "company is not desirous of entering into any contracts with the Province of Ontario." Of course the Canadian Niagara Co. is desirous of remunerative business in Ontario as well as elsewhere, and has submitted a most reasonable bid to the Ontario Government. Here and now the Canadian Niagara Co. rests its case upon a consideration of its rights as a Canadian corporation, and not upon any pretense that, representing American capital, it has therefore any particular right of hearing which is not open equally to the Electrical Development Co. of Ontario, representing especially Canadian and English capital.

The three applications of the three Canadian companies for the right of transmission can not be, and will not be, decided by you upon a consideration of the nationality of the holders of the corporate securities.

How essential is the right of transmission, even in the view of the Electrical Development Co. of Ontario, is stated in the brief of that company at page 3, where it points out that if the amount of power which can be sold by interested parties in Canada is to become a basis of division of power to be imported into the United States, "each of the companies would doubtless willingly abandon

all sales in Canada, so as to be permitted a larger entry into the richer markets of the United States."

This frank declaration of the Electrical Development Co.—Canadian both in incorporation and in membership—serves to indicate not only its own slight appreciation of its home market, but also the sense of injustice that would be induced generally in Canada by unjust discrimination against the right of importation of Canadian power.

Since writing the foregoing we have received Mr. McFarland's third emergency call, dated November 19, in which again he complicates the possibility of international arrangement by the following extraordinary plea:

"Now there is another opportunity. Because Canada, while planning to produce 415,000 horsepower in destroying Niagara, can herself use less than 50,000 horsepower, her power companies propose to sell it in the United States. Here is our opportunity. The Secretary of War controls absolutely the admission of this power. If he shuts it out, the water which would otherwise be harnessed for the power companies will thunder its way unfettered over the great cataract.

"Inclosed are some Niagara preservation post cards. Get each one quickly into the hands of a man or woman who cares a single cent for Niagara, and let Secretary Taft thus see what the country thinks of the claims of the power companies. Ask him to admit no Niagara electrical power from Canada."

If this plea for the total exclusion of Canadian power were to prevail, the following results would happen:

The companies which have invested large sums of money in the establishment of their works would find their investments unprofitable, except to the extent that they could find consumers of power in Canada. Can anyone be fatuous enough to suppose that thereupon the companies would not seek to protect their Canadian investments by Canadian development, welcomed and assisted by the Canadian authorities? Such establishment and development in Canada, of course, would involve such concessions in the cost of Canadian power as would afford sufficient inducement to Canadian users. But with sufficient concessions, the cost of Canadian power could be brought so low that no railroad in the Province of Ontario could afford to forego the use of electricity from Niagara. Such operation would supply a market for Canadian power vastly in excess of any figures yet suggested. The Canadian Niagara Co. already has its line to Fort Erie, opposite Buffalo, and already contemplates considerable development in that vicinity and elsewhere, which ultimately may make it indifferent whether or not Canadian power shall then be transmissible into the United States.

Thus, in the end, the volume of water taken from the Niagara River would be not less than the amount which would have been taken had the Canadian power been admitted into the United States; while the United States and in particular the State of New York would lose, through the establishment in Canada of industries which otherwise would have been established in the United States.

Speaking for myself alone, and not for anyone else, I do not hesitate to express the belief that the Niagara Falls Power Co., having a New York charter right for a second tunnel in the city of Niagara Falls, could view with comparative equanimity a positive prohibition of the admission of any power from the Canadian side. Nothing could tend more directly or more effectively to make a reality of the Niagara monopoly which Mr. McFarland has regarded as potential. (First emergency call, section 9.)

The revealed purpose to coerce Canada into a treaty by laying an embargo upon power importation into the United States of course would affect Canadian development. (See Capt. Kutz, p. 14, sec. 29.)

Thus again we are led to doubt that the author of Mr. McFarland's emergency calls had formed an intelligent purpose as to the practicability of an international treaty limiting the Canadian rights.

#### CONCLUSION.

Upon these considerations, as well as upon those presented last summer, we ask the favorable action of the Secretary of War upon the application and the supplemental application heretofore submitted by the Niagara Falls Power Co. and the Canadian Niagara Co. for a permit to transmit Niagara power from Canada into the United States, the exact form of the permit to be submitted after decision of the principle.

FRANCIS LYNDE STETSON,

*For the Niagara Falls Power Co. and the Canadian Niagara Co.*



## APPENDIX A.

## THE PRIORITY OF THE CANADIAN NIAGARA CO.

The Canadian Niagara Co. is and always has been recognized by the Queen Victoria Niagara Falls Park Commissioners as the "pioneer company." (19th Rept., pp. 12-13; 18th Rept., p. 5.)

The first contract between this company and the commissioners was made April 7, 1892 (16th Rept., p. 14); the modifying contract July 15, 1899. (14th Rept., p. 11.)

Clause 11 of the modifying contract (p. 17) provides that if from any cause the supply of water at the point of intake should be diminished the company should have no claim or right of action against the commissioners "nor give to the company any right of action against other licensees or grantees of the commissioners in respect of any diminution not substantially interfering with the supply necessary for the company." The subordinating effect of this clause has been forced upon the recognition of each of the junior lessees. A substantial interference would result from the proposed diminution of our available supply. Under this contract the Canadian Niagara Co. began its work May 31, 1901 (16th Rept., pp. 5-11) before either of the other companies had even acquired a right to their present works, and long before such works were begun.

The Ontario Power Co. entered into its first contract with the commissioners—that concerning the waters of the Welland River—April 11, 1900 (14th Rept., p. 25; 16th Rept., p. 3; 19th Rept., p. 11), and its second contract—that concerning the Niagara River and its present and only constructed works—August 15, 1901. (16th Report, p. 19.)

The rights of the Ontario Co. were expressly subordinated to those of the Canadian Niagara Co. by clauses 7 and 8 of the second Ontario contract, which were as follows (16th Rept., p. 21):

"7. *Provided*, That the works on the premises delineated on the plan hereto annexed shall not interfere with or deprive the Canadian Niagara Power Co. of the right to construct, operate, and maintain the underground tunnel leading the waters of the Niagara River from the power houses and wheel pits which they are about to erect and develop in pursuance of the several agreements entered into between the Commissioners of the Queen Victoria Niagara Falls Park (herein styled the commissioners), bearing date 7th April, 1892; 15th July, 1899; and 19th June, 1901.

"8. And the company shall indemnify the commissioners from all claims or demands by any person or persons whomsoever, whether arising by reason of the exercise by the company of the powers, rights, or authorities or any of them conferred by the hereinbefore recited acts of the Parliament of Canada or either of them, or by reason of anything done by the company in the exercise thereof affecting any property, rights, or privileges heretofore by the commissioners granted to or conferred upon any person or persons whomsoever, or enjoyed, used, and exercised by any such person or persons under the commissioners; it being the intention of this agreement that should the company in the exercise of the aforesaid powers, rights, and authorities so affect any such property, right, or privileges granted by or enjoyed under the commissioners, the company shall fully indemnify the commissioners in respect thereof."

The Ontario Co. did no work upon its present plant prior to December 31, 1901 (16th Rept., p. 4), but began such work shortly after the delivery of the third agreement dated June 28, 1902, which was not validated until August 7, 1902 (17th Rept., p. 12), after the Canadian Niagara Co. had spent and incurred more than \$1,500,000 upon its entire plans for the full development of 100,000 electric horsepower. (17th Rept., p. 50.)

The Electrical Development Co. (Toronto & Niagara Power Co.) through its promoting syndicate made its first agreement with the commissioners January 29, 1903 (17th Rept., p. 30), long after the vesting of the rights of and after the beginning of actual work by each of the other two companies, whose priority, as in the Ontario contract also, was expressly recognized by the commissioners. (17th Rept., pp. 12-13.)

The rights of this Toronto syndicate were expressly subordinated to those of the Ontario Co. (17th Rept., p. 32, clause 5) and of all prior grantees, including, of course, the Canadian Niagara Co. (17th Rept., p. 37, clause 17: see also 17th Rept., p. 41, clause 5); and the syndicate was required to deposit \$25,000 as a guaranty against injury to works of the Canadian Niagara Co. or of the International Railway, by diversion or diminution of the current. (19th

Rept., pp. 16-19; 20th Rept., p. 16.) The prior rights of these earlier grantees were also expressly recognized in a further agreement dated 9th January, 1906, between the Electrical Development Co. and the commissioners (19th Rept., p. 30, clause 3), which, however, failed of legislative ratification.

In their memorandum of argument, submitted in December, 1902, before the Canadian commissioners (17th Rept., pp. 51, 52), Sir Christopher Robinson and Mr. Macrae, the counsel for the Toronto company, made the following statement:

"If the Canadian Niagara Power Co. can demonstrate that the taking of water in the manner proposed by the applicants will cause physical injury of a substantial kind to their licensed works, the Government would be justified in refusing the applicants permission; but the burden of establishing this injury rests upon that company."

This necessary admission as to the immunity of the physical structures of the Canadian Niagara Co. from injury through the establishment of the works of the Toronto company, by necessary implication concedes also the immunity of the Canadian Co. in the operation of its works, from depreciation or diminution of its granted rights in order to enable the Toronto company to operate its junior works to their full extent.

In other words, the undoubted right of the Toronto company under its agreement of January 29, 1903, to use the Canadian reservation waters therein granted, is a right to take such waters only to the extent that they are available after the prior grants of the commissioners shall have been fully satisfied. This priority of right entitles the prior licensees to preferential consideration, according to their priorities, whenever and wherever conflict in respect thereof may arise among the several licensees. Certainly it should not be overlooked in the present discussion, which is to be concluded upon a full recognition of all the equities of all the parties.

FRANCIS LYNDE STETSON,

*For the Niagara Falls Power Co. and the Canadian Niagara Co.*

#### APPENDIX B.

AMERICAN CIVIC ASSOCIATION,  
OFFICE OF THE PRESIDENT,  
Harrisburg, Pa., December 1, 1906.

Mr. A. C. DOUGLASS,  
*Niagara Falls, N. Y.*

DEAR SIR: I have never made to anyone, consciously, a misleading statement. I recognize your entire honesty of purpose also. And I therefore, as I told you, proposed to obtain the details as to the statement I made in regard to the reduction of the crest line of Niagara Falls.

Hon. Charles M. Dow, of Jamestown, N. Y., chairman of the New York State Reservation at Niagara, has replied to me by wire, referring to pages 168 and 169 in the report of the hearings before the Committee on Rivers and Harbors, giving his statement in my presence, and, I think, in yours, on April 21 last. In regard to this matter.

If you will look this up you will see he made a clear-cut and definite statement, which fully supported my statement. When you made your explanation on July 12 last, I did not understand in any sense that it refuted Mr. Dow's statement, but I did understand you to say that the amount of water that was cut off by the change in the crest line was of a character similar to that then falling from the precipice near the Goat Island shore, and I called the Secretary of War's attention to this at the time, as you may remember.

The letter printed in Mr. Stetson's brief is, of course, conclusive evidence of the fact that this was not done for the interest of any power company. I could not know of this evidence, naturally, four months in advance of its presentation. I will not use the statement again in the same form.

I am glad to note that you have been made mayor of Niagara Falls. \* \* \* We differ in this matter, but I see no reason for calling names.

Yours, truly,

J. HORACE MCFARLAND, *President.*

P. S.—I should be glad if you would call this statement to the attention of Mr. Stetson, whose address in New York I do not know.

DECEMBER 5, 1906.

J. HORACE McFARLAND, Esq.:

DEAR SIR: I have received through Mayor-elect Douglas, of Niagara Falls, your letter to him of December 1, which you requested him to bring to my attention and in which you undertake to modify the statement which you have published to thousands of people, that the Canadians already had cut off 500 feet of the Horseshoe Falls "to accommodate a power company," and, again, "to give a better chance to one of the power companies."

I observe that you regard as conclusive Chairman Langmuir's letter and statement that this work was done for the purposes of and under the express order of the Canadian commission itself and not "to accommodate a power company."

You say that naturally you could not know of this evidence four months in advance of its presentation. But will you allow me to suggest that the fact as stated by me was true, even though this particular evidence of the fact did not exist; and that by my direction and in the presence of the general manager of our company this fact was brought to your attention directly upon July 12? When you undertook to doubt the truth of the statement of the power companies, which, as you now recognize, was perfectly true, it was, I most respectfully submit, your duty to exhaust all sources of information before undertaking to advise the American public of that which not only was absolutely untrue, but was grossly unjust to our companies.

In apparent justification of your original error you refer to the statement of Chairman Dow before the Committee on Rivers and Harbors on April 21, as published upon pages 168-169 of the report of the hearings before that committee; and you add, "If you will look this up you will see he made a clear-cut and definite statement which fully supported my statement."

In answer to this invitation, I have referred to Mr. Dow's cited testimony, and I do not find that either fully or otherwise does it support your statement that this work was done "to accommodate a power company" or "to give a better chance to one of the power companies." Mr. Dow does state that the filling in was done by the power companies, but he does not state, nor does he undertake to state, why the power companies did the filling in. The sting of your charge was not that "the filling in had been done by the power companies," which is true, and which is all that Mr. Dow said, but it was in the allegation that the filling in was done by the power companies "for their own purposes," which is untrue and which very tardily you recognize as untrue under the compulsion of Chairman Langmuir's letter, that the filling in was done for the benefit of the Canadian Park by the orders of the Canadian commissioners and not for the benefit of any power company.

I am sending a copy of this communication to Mr. Charles M. Dow, and also appending the same to the revision of my brief before the Secretary of War.

I am, faithfully, yours,

FRANCIS LYNDE STETSON.

#### APPENDIX C.

NEW YORK, December 1, 1906.

W. J. BARDEN,

*Captain, Corps of Engineers, Washington, D. C.*

MY DEAR SIR: I beg to acknowledge the receipt of your favor of November 28, transmitting the Supplemental Report of Capt. Kutz.

I have only to express my appreciation of the reasonableness of Capt. Kutz's additional conclusions, which I am happy to accept with the following modifications:

(1) As stated at the hearing before the Secretary of War, I am willing, without prejudice to our reserved right and claim of priority, and as a *modus vivendi*, pending a treaty negotiation, to consent to the equal division between the three companies of the 157,500 horsepower for which in his first report Capt. Kutz recommended that transmission permits might now issue.

This concession is made without any doubt as to the justice of the report of Capt. Kutz; but because our present Canadian installation would not enable us now to develop or to transmit the full amount of 60,000 horsepower. So soon as we shall have completed our Canadian power house as now proposed, to the full extent of 121,000 horsepower, we shall upon the ground of our priority expect to be permitted to transmit that full amount irrespective of any claim of any other company.

(2) While upon the hearing I concurred that permits for power transmission, as well as for power diversion, should be preferably in terms of cubic feet of water rather than in terms of horsepower, I did not intend, nor do I intend, to concede that the Ontario Power Co. has any ground upon which it can claim special consideration; nor did or do I intend to concede that upon any ground the Ontario Power Co. is entitled to take any water until after the full demand of the Canadian Niagara Co. has been met.

(3) As already stated in my earlier brief I ask that at all times the Canadian Niagara Co. shall be authorized to supplement and to make good from its works the draft, which under the permit of the Secretary of War the Niagara Falls Power Co. shall be authorized to make on the American side to the extent that, for any cause, such authorized draft shall fall short of the amount authorized. As these two companies are substantially one, their combined draft should be considered as one; and so long as such combined draft does not exceed the aggregate authorized by the law, it would seem to be equitable that if necessary water might be taken from the Canadian Falls to the relief of the American Falls.

(4) I desire to renew the prayer contained in my earlier brief, that consideration be given at present to our application for additional power, and this for the reason there indicated, that such permission is necessary in order to enable us to proceed with the completion of our power house, for which the wheel pit already has been dug. In this particular our position is analogous to that described by the felicitous figure used on Monday by the Secretary of War. We are in the position of the man who has built his house to the second story, and thereby is involved in the necessary expense and consequence of a roof to cover it.

For the protection of this right to complete our power house to the full extent of 121,000 horsepower, we rely primarily upon our prior right to take all of the power necessary for our purposes, even though our juniors go dry, and, secondarily, if, notwithstanding our plea, our claim to priority be rejected, then upon a consideration of our equities in respect of the additional power to be granted.

(5) I ask that after decision the form of permits be settled on notice.

This communication I submit to the Secretary of War in printed copies as constituting my reply upon the entire subject, including Capt. Kutz's report.

Your obedient servant,

FRANCIS LYNDE STETSON,

*For Canadian Niagara Co. and Niagara Falls Power Co.*

Postscript, December 3, 1906. In paragraph 5 of this report Capt. Kutz observes that the Niagara Falls Power Co. now is limited to the production of 76,000 horsepower (which as hereafter considered is electric horsepower not including hydraulic service), which falls short of its 102,000-horsepower requirements as stated in paragraph 4, and thus "throws a load of 26,000 horsepower on the plant of the Canadian Niagara Co."

These figures may be explained as follows:

The amount of 102,000 horsepower represents the aggregate of the maximum use of power, both electric and hydraulic, supplied by the Niagara Falls Power Co.

To this amount of maximum use the 8,600 cubic feet of water permitted would be barely adequate, and would allow only 76,000 electric horsepower available for sale, as follows:

Hydraulic:

Niagara Falls Waterworks	feet	80	
International Paper Co.	do	808	
			888

Electric:

Exciters	do	84.4	
Available for sale <sup>1</sup>	do	7,676	
			7,710.4
			8,598.4

FRANCIS LYNDE STETSON.

<sup>1</sup> 76,000 horsepower  $\times$  101 second-feet = 7,676 second-feet.

## THE PRESERVATION OF NIAGARA FALLS.

To the EDITOR OF THE SCIENTIFIC AMERICAN :

At the head of the editorial columns of your publication I note that it is declared that "The purpose of this journal is to record accurately and in simple terms the world's progress in scientific knowledge and industrial achievement." Immediately following this declared purpose, in your issue of May 27, you publish an editorial entitled "Niagara Falls again threatened."

The writer has resided a lifetime in proximity to the great Falls of Niagara, has witnessed the electrical power development from the beginning, is familiar with every detail of it, and confidently asserts that the diversion of the waters of the Niagara River for power-development purposes has made absolutely no perceptible difference in the flow of the river. The only difference that has been seen in the river has been caused by the changes in the direction of the wind, by ice jams for a few hours in the winter, and by high and low water conditions that are periodical and are common to all lakes and streams. Sometimes Lake Ontario washes its banks and sometimes there are many yards of beach. In corroboration of my statement that the power development has made no perceptible difference in the flow of the river, I bring official testimony. In the early summer of 1903 the two power company plants in this city were entirely shut down for several hours, and a test was made by United States engineers to ascertain the effect upon the flow of the river over the Falls. In a letter to the Engineering News of July 2, 1908, Maj. Charles Keller, Corps of Engineers, United States Army, officer in charge of lake survey, said that during the period of the shutdown "the rise shown by the gauge set by the lake survey close to the crest of the American Fall was about an inch, and was fully as much as anticipated." Another test about the same time was officially reported by G. Edward Wilson, secretary of the American section of the International Waterways Commission, as forty-six one-hundredths of an inch. The Burton law was in effect then, it is in effect now, and Niagara Falls is not "threatened" any more now than it was then. In fact, a treaty between the United States and Great Britain has since been ratified which permits the diversion of 20,000 cubic feet per second of water on the American side and 36,000 cubic feet per second of water on the Canadian side. This provision was in accordance with the recommendation of the International Waterways Commission, which thoroughly investigated the subject. The present diversion on the American side of the river is 15,600 cubic feet per second of water, so that there is still a leeway of 4,400 cubic feet per second of water under the limitations of the treaty. Before the present permits were granted under the Burton law that went into effect June 20, 1906, William H. Taft, then Secretary of War, came to Niagara Falls and gave a hearing to all parties interested. In granting the power permits Secretary Taft promulgated a lengthy opinion, in which he said: "The International Waterways Commission, a body appointed under a statute of the United States to confer with a similar body appointed under a statute of Canada, to make recommendations with reference to the control and government of the waters of the Great Lakes and the valley of the St. Lawrence, have looked into the question of the amount of water which could be withdrawn on the American and the Canadian sides of the Niagara River without substantial injury to the cataract as one of the great natural beauties of the world, and after a most careful examination they have reported, recognizing fully the necessity of preserving intact the scenic grandeur of the Niagara Falls, that it would be wise to restrict diversion to 28,600 cubic feet per second on the American side of the Niagara River and to restrict the diversion on the Canadian side to 36,000 cubic feet per second."

Later the British-American treaty provided for a diversion of 20,000 cubic feet per second of water on the American side and 36,000 cubic feet per second of water on the Canadian side. My information is that the present diversion is 27,000 cubic feet per second of water. Your statement is that it is 34,000 cubic feet per second of water. In the opinion referred to above Secretary Taft continued:

"I have already said that the object of the act is to preserve Niagara Falls. It is curious, however, that this purpose as a limitation upon the granting of permits by the Secretary of War is only specifically recited in reference to his granting permits for diversion of additional amounts of water over 15,600 cubic feet on the American side, which are to be limited to 'such amount, if any, as in connection with the amount diverted from the American side, shall

not interfere with the navigable capacity of said river or its integrity and proper volume as a boundary stream or the scenic grandeur of Niagara Falls.' This peculiarity in the act is significant of the tentative opinion of Congress that 15,600 cubic feet of water might be diverted on the American side and 160,000 electrical horsepower might be transmitted from the Canadian side without substantial diminution of the scenic grandeur of the Falls." And then Secretary Taft gave his decision that "acting, however, upon the same evidence which Congress had, and upon the additional statement made to me at the hearing by Dr. John M. Clark, State geologist of New York, who seems to have been one of those engaged from the beginning in the whole movement for the preservation of Niagara, and who has given close scientific attention to the matter, I have reached the conclusion that with a diversion of 15,600 cubic feet on the American side and the transmission of 160,000 horsepower from the Canadian side the scenic grandeur of the Falls will not be affected substantially or perceptibly to the eye."

That is the diversion that is taking place to-day. It was the judgment of the International Waterways Commission and the men who framed the British-American treaty that an even greater diversion would not be injurious. It was the opinion of the Congress of the United States and Secretary Taft that the present diversion would not be injurious. A test made by engineers of the United States Lake Survey Corps proved that the diversion is not perceptible, and we who see Niagara River daily say that no effect on its flow is seen as the result of power development. There is now being developed from the Falls of Niagara 350,000 electrical horsepower. Their total power-producing capacity is estimated at from 5,000,000 to 7,000,000 horse. Do you think the cataracts as a spectacle are seriously threatened?

C. T. WILLIAMS,  
*City Industrial Agent.*

NIAGARA FALLS, N. Y.

JUNE 27, 1911.

THE SPEAKER OF THE HOUSE OF REPRESENTATIVES,  
*Washington, D. C.*

SIR: I have the honor to invite attention to the situation with respect to the legislation for the protection of Niagara Falls. The act of June 29, 1908 (the Burton Act), as extended by joint resolution of March 3, 1909, by which the supervision of the operations of the power companies at Niagara is placed in the hands of the Secretary of War, will expire by limitation on June 29, 1911, two days hence, and unless some action is taken by Congress the authority of the War Department in the matter will then cease, and the existing permits issued by the Secretary of War, in conformity with the terms of the act, will become void.

The treaty of May 13, 1910, with Canada fixes a maximum limit for permissible diversions of water at Niagara, but does not vest in any person or commission the power to control such diversions nor place upon any person or commission the duty of seeing that these diversions do not exceed the limits fixed by the treaty. The importance of early action in the matter by Congress is therefore apparent if the dangers of a partial or complete lapse of the supervision now exercised by the War Department are to be avoided.

I therefore urgently recommend that the matter be laid before the House, and that the importance of the early passage of Senate joint resolution 3 or of a substitute acceptable to the House be emphasized.

Very respectfully,

H. L. STIMSON,  
*Secretary of War.*

#### WHAT THE AMERICAN CIVIC ASSOCIATION IS AND DOES.

The American Civic Association for the past eight years has been a recognized national organization for the making of better living conditions for all America, especially in the improvement of the physical and structural growth of communities. Its purpose is briefly stated as being "the cultivation of higher ideals of civic life and beauty in America, the promotion of city, town, and neighborhood improvement, the preservation and development of landscape and the advancement of outdoor art."

The general offices of the American Civic Association were established in Washington in January, 1910, and from that city there has been conducted a

vigorous propaganda by correspondence and distribution of printed literature extending to all parts of the United States and Canada. The association maintains a department for the rental of lantern slides, which may be used by local speakers, and which are descriptive of the changes that may be effected in towns and cities.

These are particularly valuable because they illustrate, in picture form, conditions "before and after" in scores of communities where definite work has been done. Under the patronage of the association sectional meetings have been held in various sections and during the year to come it is proposed to arrange several important territorial meetings where representatives from a group of States may be brought together to hear the practical talks given by experienced men on many phases of the work of the association.

The American Civic Association is supported by a membership of individuals and affiliated societies, the annual fee being \$5, with special classes of sustaining members at \$10, life members at \$50, and contributing members at larger sums.

The principal officers of the association are J. Horace McFarland, of Harrisburg, Pa., president; Clinton Rogers Woodruff, of Philadelphia, first vice president; William B. Howland, of New York, treasurer; and Richard B. Watrous, of Washington, secretary. These are assisted by five vice presidents—George B. Dealey, of Dallas, Tex.; Dr. John Wesley Hill, of New York; Mrs. Edward W. Biddle, of Carlisle, Pa.; George W. Marston, of San Diego, Cal.; and J. Lockie Wilson, of Toronto, Canada. In addition there is a general executive board made up of 18 prominent men and women from various cities all over the country.

The scope of the association is not limited. It stands for better living conditions, and that takes in almost everything. It stands for clean streets and solicits the aid of every citizen; it advocates germ-free drinking water, and is doing what it can to educate the public to see that economy and health are both on the side of good water; it espouses underground wires for electric lines, and is striving to impress the public with the importance of such a program; it believes in playgrounds for the children and parks for grown-ups, and is lending aid to every agency that would bring them about; it believes water fronts free from filth are essential to public health, and therefore advocates adequate systems of sewage. Public-comfort stations, garden schools for children, grouping of public buildings, care of the trees and planting of new ones—these are some of the planks in the platform of the association. And it has more effective means of campaigning for the public good than are usually at the disposal of uplift workers. Its members are enthusiastic believers in the promotion of the public welfare, and are moved by humanitarian instincts; it has hundreds of affiliated organizations which work to further its purposes; it has an efficient publicity system for commanding the public attention and a system of distributing its literature where it will count. Thus equipped, it expects to do its part toward making the ensuing year notable for the promotion of the welfare of all classes and conditions of society.

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IN THE CIRCUIT COURT OF THE UNITED STATES WITHIN AND FOR  
THE DISTRICT OF COLORADO, SITTING AT PUEBLO.

The Cascade Town Company, complainant, v. The Empire Water and Power Company et al., defendants. In equity. No. 413.

Leander A. Bigger, complainant, v. The Empire Water and Power Company et al., defendants. In equity. No. 353.

I. THE FACTS.

Complainant, The Cascade Town Co., owns several hundred acres of land up Ute Pass, about 11 miles from Colorado Springs. Fountain Creek flows through Ute in an easterly direction, and as it passes the lands of the complainant company its waters are augmented by those of Cascade Creek—short in length of flow but precipitous—which come down from the watershed on the northerly slope of Pike's Peak to the westerly.

The said complainant company and its predecessors in title have owned these lands for many years, and they began improving them as a summer resort more

than 20 years ago and have maintained them as such ever since and have not sought to utilize them otherwise. For that purpose they have constructed hotels there and built cottages, roads, and trails on its lands extending up through Cascade Canyon, through which the stream of the same name flows, and on beyond into the mountains, laid out, dedicated to the public, and improved a small park in said canyon, made a lake and fountain, built a pavilion or auditorium for conventions, and otherwise improved its grounds, thereby adding to the attractions of the place as left by nature. The complainant company and its predecessors are not, and were not, municipal corporations but business ventures created for the purpose of maintaining their property as a resort for tourists during the summer season. The place is known as Cascade. The Midland Railway, which traverses Ute Pass, has a station there. The complainant company has sold some of its property to persons who desired to improve the same as summer homes, and the complainant Rigger has spent about \$15,000 in improving his home on land bought from the company, lying on both sides of Cascade Creek just below the canyon. The company obtains an income from those who stop at its hotels and enjoy other accommodations which it offers. It has spent a large amount of money in improvements. The roads and trails up Cascade Canyon and on into the mountains were constructed at an expense of fifteen or twenty thousand dollars. It also built a small water-works to supply the cottages and its hotels. It advertises the place for the purpose of inducing the public to go there, and for the past quarter of a century it has been visited annually by twelve or fifteen thousand people. It has a permanent population of 50 or 60 people.

Among other attractions held out in its advertisements are Cascade Canyon and the falls of Cascade Creek through the canyon. The canyon and falls are rare in beauty and constitute the chief attraction. Without them the place would not be much unlike any other part of Ute Pass. The canyon is about three-quarters of a mile long and very deep; its floor and sides are covered with an exceptionally luxuriant growth of trees, shrubbery, and flowers. This exceptional vegetation is produced by the flow of Cascade Creek through the canyon and the mist and spray from its falls. Some of these falls are as much as 30 feet in height, but the difference in elevation between the foot and the head of the canyon is so great that the falls are almost continuous from the head down. The volume of water is the greatest during the summer season. It comes from the melting snows and on the north slope of Pike's Peak. But the flow is fairly even, due to the fact that the upper stretches of the watershed are composed of disintegrated granite, into which the water first sinks and gradually percolates until gathered into the bed of the stream. The volume is said to be equivalent to a stream about 8 feet wide and 6 to 8 inches in depth. The vegetation in the canyon and up its sides consists, in part, of pine, spruce, fir, balsam, aspen, black birch, Japanese maple, thimbleberry, wild cherry, chokecherry, and aster columbine, larkspur, wild rose, the red raspberry, wild gooseberry, ferns, mosses, and many other kinds of trees, shrubs, and flowers. The stream is annually stocked with trout. The birds which are found in the canyon—some grouse, a few squirrels, and perhaps a few wild animals there—are protected by the complainant company. The complainant called a florist of 25 years' experience and a landscape gardener of 25 years' experience as witnesses. They tell us that the native flora of the country is quite extensive in Cascade Canyon; that the evergreen features are perfect; that there are three or four varieties of pine, three of juniper, and three of spruce, probably 25 varieties of native perennials, and several varieties of moss growth and a large variety of wild flowers and flowering shrubs; that the waterfalls create a spray and mist which, together with the underground seepage down the sides of the canyon, produce this very luxuriant growth, there being at least 200 varieties of vegetation; and that it is far superior in that respect to any other canyon in the neighborhood, and exceptional. The seepage and the mist and spray give life to the foliage.

The defendant was incorporated for the purpose, among other things, of generating electricity by water power, and to dispose of the same as a commodity; and to execute that purpose it sent its agents on to the watershed of Pike's Peak, above the head of Cascade Canyon, and located a reservoir site and did some acts, at small expense, looking to the execution of that purpose, whereby it intended and expected to impound the waters in such reservoir and later conduct it in pipes down the mountain to and beyond the property of the complainant company. And thereupon complainants filed their several bills



asking that the defendant be enjoined from so doing as a threatened injury to their vested rights.

It is found as a fact that if the defendant do impound the waters of Cascade Creek above the falls and conduct it therefrom in pipe as aforesaid, the falls in the canyon and the vegetation on its floor and sides will be largely if not wholly destroyed and the canyon hence become a dry gulch, and that all the waters flowing in said stream are needed by complainant company, and are necessary for the aforesaid purpose to which they have been applied by said complainant.

## II. THE LAW.

1. The first contention of both complainants is that the Government, while it was the owner of the lands on which the canyon and the falls are situated, had riparian right in the stream and that those rights were conveyed by patent from it, through mesne conveyances, to the complainants.

This contention can not be accepted. There are no riparian rights in Colorado as against a valid appropriation of water.

In *Sternberger v. Eaton Co.* (45 Colo., 401, 404), it is said:

"The doctrine in this State that the common-law rule of continuous flow of natural streams is abolished is so firmly established by our constitution, the statutes of the Territory and the State, and by many decisions of this court, that we decline to reopen or reconsider it, however interesting discussion thereof might otherwise be, and notwithstanding its importance."

And again, page 403:

"The Supreme Court of the United States in several cases has approved and indicated its satisfaction with the decisions of the State courts which hold that the common-law doctrine has been abolished, and has said that each State, without interference by the Federal courts, may for itself, and as between rival individual claimants determine which doctrine shall be therein enforced."

In *Coffin v. Left Hand Ditch Co.* (6 Colo., 448, 446), it is said:

"It is contended by counsel for appellants that the common-law principles of riparian proprietorship prevailed in Colorado until 1876, and that the doctrine of priority of right to water by priority of appropriation thereof was first recognized and adopted in the constitution. But we think the latter doctrine has existed from the date of the earliest appropriations of water within the boundaries of the State. The climate is dry, and the soil, when moistened only by the usual rainfall, is arid and unproductive; except in a few favored sections, artificial irrigation for agriculture is an absolute necessity. Water in the various streams thus acquires a value unknown in moister climates. Instead of being a mere incident to the soil it rises when appropriated to the dignity of a distinct usufructuary estate, or right of property. It has always been the policy of the national as well as the Territorial and State governments to encourage the diversion and use of water in this country for agriculture, and vast expenditure of time and money have been made in reclaiming and fertilizing by irrigation portions of our unproductive territory. Houses have been built and permanent improvements made; the soil has been cultivated and thousands of acres have been rendered immensely valuable, with the understanding that appropriations of water would be protected. Deny the doctrine of priority or superiority of right by priority of appropriation and a great part of the value of all this property is at once destroyed.

"The right to water in this country by priority of appropriation thereof we think is, and has always been, the duty of the National and State governments to protect. The right itself, and the obligation to protect it, existed prior to legislation on the subject of irrigation. It is entitled to protection as well after patent to a third party of the land over which the natural stream flows as when such land is a part of the public domain; and it is immaterial whether or not it be mentioned in the patent and expressly excluded from the grant.

"The act of Congress protecting in patents such right in water appropriated, when recognized by local customs and laws, was rather a voluntary recognition of a preexisting right of possession, constituting a valid claim to its continued use, than the establishment of a new one. (*Broder v. Notoma W. & M. Co.* 11 Otto, 274.)

"We conclude, then, that the common-law doctrine giving the riparian owner a right to the flow of water in its natural channel upon and over his lands, even though he makes no beneficial use thereof, is inapplicable to Colorado. Imperative necessity, unknown to the countries which gave it birth, compels the recognition of another doctrine in conflict therewith. And we hold that,

in the absence of express statutes to the contrary, the first appropriator of water from a natural stream for a beneficial purpose has, with the qualifications contained in the Constitution, a prior right thereto to the extent of such appropriation."

Congress, as early as 1866, recognized the necessity of the abolition of the common-law doctrine of riparian rights in the arid States. Speaking of the act of July 26, 1866, the Supreme Court, in *United States v. Rio Grande Irrigation Co.* (174 U. S., 690, 740), said:

"The effect of this statute was to recognize, so far as the United States are concerned, the validity of the local customs, laws, and decisions of courts in respect to the appropriation of water."

And again, at page 702:

"While this is undoubted (the rule of the common law as to riparian rights), and the rule obtains in those States in the Union which have simply adopted the common law, it is also true that as to every stream within its domain a State may change this common-law rule and permit the appropriation of the flowing waters for such purposes as it deems wise."

In *Gutierrez v. Albuquerque Land Co.* (188 U. S., 545, 552) it is said:

"We think, in view of the legislation of Congress on the subject of the appropriation of water on the public domain, particularly referred to in the opinion of this court in *United States v. Rio Grande Irrigation Co.* (174 U. S., 690, 704-706), the objection is devoid of merit. As stated in the opinion just referred to, by the act of July 26, 1866 (14 Stat., 253), Congress recognized as respects the public domain, so far as the United States are concerned, the validity of the local customs, law, and decisions of courts in respect to the appropriation of water."

Also *Clark v. Nash* (195 U. S., 361, 370):

"The rights of a riparian owner in and to the use of the water flowing by his land are not the same in the arid and mountainous States of the West that they are in the States of the East. These rights have been altered by many of the Western States, by their constitution and laws, because of the totally different circumstances in which their inhabitants are placed, from those that exist in the States of the East, and such alterations have been made for the very purpose of thereby contributing to the growth and prosperity of those States arising from mining and the cultivation of an otherwise valueless soil by means of irrigation. This court must recognize the difference of climate and soil which rendered necessary these different laws in the States so situated."

This question had direct consideration by the circuit court of appeals for this circuit in the case of *Snyder v. Colorado Gold Dredging Co.*, opinion in which was filed August 4, 1910. In that case it is said:

"The common-law doctrine in respect of the rights of riparian proprietors in the waters of natural streams never has obtained in Colorado. From the earliest times in that jurisdiction the local customs, laws, and decisions of courts have united in rejecting that doctrine and in adopting a different one which regards the waters of all natural streams as subject to appropriation and diversion for beneficial uses, and treats priority of appropriation and continued beneficial use as giving the prior and superior right. (*Yunker v. Nichols*, 1 Colo., 551; *Coffin v. Left Hand Ditch Co.*, 6 Colo., 443, 447; *Platte Water Co. v. Northern Colorado Irrigation Co.*, 12 Colo., 525, 531; *Crippen v. White*, 28 Colo., 296.) In so choosing between these two inconsistent doctrines Colorado acted within the limits of her authority, first as a Territory and then as a State, and her choice was recognized and sanctioned by Congress, so far as the public lands of the United States were concerned."

And again:

"It needs only to be added that, by the settled rule of decision in the Supreme Court of the United States, conveyances by the United States of public lands on nonnavigable streams and lakes, when it is not provided otherwise, are to be constructed and have effect according to the law of the State in which the lands are situate, so far as the rights and incidents of riparian proprietorship are concerned. (*Hardin v. Jordan*, 140 U. S., 370, 384, 402; *Hardin v. Sheed*, 190 U. S., 508, 519; *Whittaker v. McBride*, 197 U. S., 510; *Harrison v. Fite*, 78 C. C. A. 447, 148 Fed., 781, 783.) Here it is not provided otherwise, either by statute or by the patent, and, as has been seen, the local law does not recognize a conveyance of the land as carrying any right to the unappropriated waters of the stream."

It is therefore believed that the patent from the Government did not pass, and the patentee did not take riparian rights to the waters in question, but

that said lands are held by the complainants subject to the law of appropriation of waters as established in this State. And inasmuch as there is no testimony showing any right to the waters of Cascade Creek in the complainant Bigger, other than that of a riparian owner, the finding of the court must be against him, and his case dismissed, if the alleged threatened acts would constitute a valid appropriation.

2. If the defendant were permitted to impound and pipe the waters of Cascade Creek for the purpose of generating electricity to be sold by it as a commodity, as charged in the bill it was threatening to do and admitted in the answer and shown by the proof it intended to do, such acts would have constituted a valid appropriation of said waters under the constitution and laws of the State of Colorado as they have been constituted by the court of last resort in this State. (*Lamborn v. Bell*, 18 Colo., 346; *Sternberger v. Seaton* N. Col., 45 Colo., 401; See also, *Schwab v. Beam*, 86 Fed., 41, 43.)

3. Does the testimony show an appropriation of the waters of Cascade Creek by the complainant company or its predecessors in title along the falls as they flow through Cascade Canyon?

The people of Colorado dedicated to the public all unappropriated waters of every natural stream within its borders and made them subject to appropriation as private property. (Const. of Colo., art. 16, secs. 5 and 6.)

Section 6 reads, in part, as follows:

"The right to divert the unappropriated waters of any natural stream to beneficial uses shall never be denied."

But neither the manner of making such appropriation nor the acts necessary to be done to constitute an appropriation has been definitely fixed by the constitution, by the statutes, or by the decisions of the courts. Nor has the term "beneficial uses," as used in section 6, supra, been definitely fixed and limited in its meaning. I can not better express my own views as to the meaning of that phrase, applicable to the facts here, than to quote a part of the brief of the learned solicitor for complainant:

"The courts have not defined, because they as yet are unable to define, the exact boundaries of the territory known as 'beneficial use.'"

Mr. Kinney, in his work on Irrigation, says:

"The purpose contemplated for the use of the water may be irrigation for agricultural or horticultural purposes, mining, milling, manufacturing, domestic, or any other purpose for which water is needed to supply the natural and artificial wants of man provided to be a beneficial use." (Sec. 150)

Pomeroy says (sec. 47):

"The purpose may be mining, milling, manufacturing, irrigating, agricultural, horticultural, domestic, or otherwise; but there must be some actual, positive, beneficial purpose, existing at the time or contemplated in the future, as the subject for which the water is to be utilized.

"The public health is a beneficial use, and for that purpose, among others, a city may condemn streams of water. The water, when so obtained, may be used, and is used, in any manner that will promote the public health; it is used for sprinkling the streets, washing the pavements, and flushing the sewers.

"Rest and recreation is a beneficial use, and for that purpose water is used to make beautiful lawns, shady avenues, attractive homes, and public parks, with fountains, lakelets, and streams, and artificial scenic beauty.

"Cities condemn water and use water for the foregoing purposes. No one questions but that public health, rest, and recreation is a domestic use as well as a beneficial use. No one, we may add, questions the right to these uses.

"The law inside of a city is not different from the law outside of the city. In one sense there is no commercial value to fountains and parks; they do not bring in a revenue, but they are vastly beneficial to the public health, rest, and recreation, and such fact is recognized the world over, and there can be no question but that water applied to their maintenance and creation is a 'beneficial use.'

"We say that the creation of a summer resort is a beneficial use. Is it no benefit to the public to spend money in making a beautiful place in nature visible and enjoyable? Is it not in line with public health, rest, and recreation? If a person takes a stream and, after putting in waterfalls, ponds, bridges, walls, shrubbery, and bluegrass sod, works it into a beautiful home, that is a beneficial use. It is beneficial to the weary, ailing, and feeble that they can have the wild beauties of nature placed at their convenient disposal. Is a piece of canvas valuable only for a tent fly but worthless as a

painting? Is a block of stone beneficially used when put into the walls of a dam and not beneficially used when carved into a piece of statuary? Is the test dollars, or has beauty of scenery, rest, recreation, health, enjoyment something to do with it? Is there no beneficial use except that which is purely commercial?

"It would seem that parks and playgrounds and blue grass are benefits and their uses beneficial although there is no profit derived from them; if not, then the contention of the defendant corporation must be maintained that nothing but money-making schemes are beneficial. The world delights in scenic beauty, but must scenic beauty disappear because it has no appraised cash value? If this defendant corporation takes the water out of Cascade Canyon, it can take the water out of the Seven Falls and Cheyenne Canyon, and Glen Eyrie, and the beautiful parks, and homes and summer resorts of the State. We feel compelled to say that there are other beneficial uses of the fall of water than the mere production of commodities in competition with others now existing. When the defendant company says the complainants are putting the fall of the water to no beneficial use, it means that the complainants are not ruining the beautiful scenery for cash."

It is therefore held that the maintenance of the vegetation in Cascade Canyon for the purposes to which it has been devoted by the complainant, by the flow and seepage, and mist and spray of the stream and its falls as it passes through the canyon, is a beneficial use of such waters within the meaning of said section 6, article 16 of the constitution, that the complainant intended to use the waters of Cascade Creek for that purpose, and has so used them for many years and thereby appropriated the same. The complainant is not required to construct ditches or artificial ways through which the water might be taken from the stream in order that it might appropriate the same. The only indispensable requirements are that the appropriator, in order to constitute a valid appropriation, first, must intend to use the waters for a beneficial use, and, second, actually apply them to a beneficial use. There is express statutory recognition of utilization of lands from natural overflow as one means of appropriation, as in the flooding of meadows by natural overflow without the use of any artificial means whatever. (Rev. Stats. of Colo., 1908, sec. 3165; Humphreys Co. v. Frank, 46 Colo., 524; Broad Run Inv. Co. v. Deuel & Snyder Imp. Co., 108 Pac. (Colo.), 755.)

The supreme court of this State, in considering the means necessary to constitute appropriation, in *Thomas v. Guiraud* (6 Colo., 530, 533), said:

"We do not agree with counsel for plaintiff in error in their position, as we understand it that the appropriation of water by Guiraud in 1862 was not valid or permanent because he constructed no ditches. Some of the witnesses testify that he did construct ditches, but it is unnecessary for us to weigh the testimony and determine the preponderance thereof upon this question. If a dam or contrivance of any kind will suffer to turn water from the stream and moisten the land sought to be cultivated, it is sufficient though no ditch is needed or constructed. Or if land be rendered productive by the natural overflow of the water thereon, without the aid of any appliances whatever, the cultivation of such land by means of the water so naturally moistening the same is a sufficient appropriation of such water, or so much thereof as is reasonably necessary for such use. The true test of appropriation of water is the successful application thereof to the beneficial use designed; and the method of diverting or carrying the same or making such application is immaterial."

And again, considering the same question, that court, in *Larimer Co. R. Co. v. People ex rel.* (8 Colo., 614, at 616), declares:

"It is claimed that when the constitution recognizes the right to appropriate water by diversion, it excludes the appropriation thereof in any other manner. Further, that the word 'divert' means to take or carry it away from the bed or channel of the stream; that therefore respondent's act of utilizing a natural reservoir in the bed of the stream and thus storing surplus water for future use, not being a diversion in the sense of the constitutional provision cited, is in conflict therewith. We are not prepared to concede the correctness of counsel's position. It is our opinion that the above is not the most natural and reasonable view to adopt concerning the meaning of the constitution. The word 'divert' must be interpreted in connection with the word 'appropriation' and with other language used in the remaining sections of that instrument referring to the subject of irrigation. We think there may be a constitutional appropriation of water without its being at the instant taken from the bed of the stream. This court has held that 'the true test of the appropriation of

water is the successful application thereof to the beneficial use designed, and the method of diverting or carrying the same or making such application is immaterial." (Thomas v. Guiraud, 8 Colo., 530.)

See also Fort Morgan L. & C. Co. v. South Platte Ditch Co., 16 Colo., 1, 5.

In *Offield v. Ish*, 57 Pac. (Wash.), 809, it is said:

"The right to use the water is the essence of appropriation. The means by which it is done are incidental."

See also *McCall v. Porter* (70 Pac. (9th.), 820, 822).

It therefore appears that the waters of Cascade Creek, which the defendant threatens to impound and carry away in pipes, has already been appropriated by the complainant, the Cascade Town Co., for beneficial uses, and that it has a vested property right therein which the defendant's contemplated acts, if executed, will destroy. The complainant company may have a decree as prayed, with costs. The bill of complainant, Bigger, will be dismissed, with costs to the defendant against him.

District Judge.

PUEBLO, COLO.

[Telegram.]

FEBRUARY 17, 1911.

We respectfully urge that you use every effort to secure the adoption of Senate joint resolution 143 extending the Burton Act for the preservation of Niagara River. The Burton Act was carefully framed to recognize and protect every interest then existing to the full extent of all development then projected. To maintain the status can inflict no possible harm upon existing enterprises. To change it as proposed by the Alexander bill, will quickly produce maximum Canadian development by permitting the full utilization in the United States of the power generated in Canada against the spirit of the treaty and to the great detriment of Niagara Falls. We earnestly urge that no further hearings be granted but that the resolution be at once pressed for passage. Public sentiment throughout the entire country has hitherto been overwhelmingly expressed to Congress in support of the Burton Act.

THE MERCHANTS' ASSOCIATION OF NEW YORK.

THE J. L. HUDSON Co.,  
Detroit, Mich., May 6, 1911.

MR. RICHARD B. WATROUS,  
*Secretary American Civic Association, Washington, D. C.*

MY DEAR MR. WATROUS: I have yours 5th and have written to each member of the Senate Committee on Foreign Relations except Mr. Burton, as follows:

"I am exceedingly interested in Niagara Falls. For 40 years I have been in the habit of going there. I have never seen anything that compares with the Falls in grandeur, and I have been utterly opposed to diverting the waters from their natural course.

"I think we made a mistake in giving the power companies any rights there at all. They now use 34,000 cubic feet per second and want 58,000. I feel very earnestly that their request should be denied. The enormous amount of water that went over the Falls before any of it was diverted was none too much, and now in many places the decrease is noticeable.

"I hope your committee will report the Burton bill out favorably, and that the Senate will approve of the committee's findings. I think the financial advantage of any man or any set of men should not be considered at all in connection with such a world wonder as Niagara Falls is.

"I hope you think as I do about it, and that you will support the Burton bill."

To Mr. Burton I have written:

"I am very much interested in Niagara Falls and have written to each member of the Senate Committee on Foreign Relations as follows: 'Can I do anything further to help you in this matter?'"

With kind regards, I am,

Yours, very truly,

J. L. HUDSON.

**ERIE AND ONTARIO SANITARY CANAL COMPANY—PROPOSED BILL  
FOR CONGRESS.**

**A BILL To give effect to the treaty between the United States and Great Britain.**

Whereas it is stipulated in Article V of a treaty between the United States and Great Britain, signed January eleventh, nineteen hundred and nine, commonly known as the waterways treaty, that the United States may authorize and permit the diversion within the State of New York of the waters of the Niagara River above the Falls for power purposes, not exceeding in the aggregate a daily diversion at the rate of twenty thousand cubic feet per second, provided the level of Lake Erie and the flow of the Niagara River shall not be appreciably lowered; and

Whereas the prohibitions of Article V do not apply to the diversion of water for sanitary and domestic purposes, and for the service of canals for the purpose of navigation; and

Whereas it is stipulated in Article IV of said treaty that the boundary waters shall not be polluted on either side, to the injury of health or property on the other; and

Whereas the cities bordering upon the Niagara River and situate in the district contiguous thereto are subjected to epidemics of typhoid fever caused by the polluted water taken from Niagara River, and considerations of public health demand the abatement of these dangers without delay; and

Whereas the Erie and Ontario Sanitary Canal Company has been organized under the laws of the State of New York to construct, without State or Federal aid, a canal between Lake Erie and Lake Ontario, beginning at a point at or near Smokes Creek, south of the city of Buffalo on Lake Erie, and thence to the mouth of Eighteen Mile Creek on Lake Ontario, a distance of fifty miles, more or less; and

Whereas it is hereinafter provided that said canal shall be used free of cost by the cities of Lackawanna, Buffalo, Tonawanda, North Tonawanda, Niagara Falls, Lockport, and all other municipalities and communities situate upon the Niagara frontier, to carry off all the sewage and the sewage-polluted storm waters now flowing from said towns, cities, and municipalities into Lake Erie and the Niagara River, polluting the water thereof, to the great injury to the health of the persons living along the said Niagara frontier; and

Whereas the said canal will be of sufficient depth and width to enable boats, barges, and other water craft of large tonnage to navigate the same from its beginning on Lake Erie to a point intercepting the Erie Canal at or near the city of Lockport, in the State of New York, thereby increasing the efficiency and the value to the public of said Erie Canal; and

Whereas the level of Lake Erie will not be lowered by the building of said canal so as to interfere with or affect its navigability; and the waters flowing within the Niagara River, now under the control of the War Department, shall not be diverted so as to affect the beauty and grandeur of the volume thereof flowing over Niagara Falls: Therefore, to carry out conservation of health and power.

*Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled—*

That the Erie and Ontario Sanitary Canal Company, a corporation organized under the laws of the State of New York, be, and the same is hereby, authorized to take six thousand cubic feet of water per second from Lake Erie and Niagara River for sanitary purposes and canal navigation and power, four thousand four hundred cubic feet thereof being the remaining part unused of the twenty thousand cubic feet allowed for power on the American side under said treaty, and one thousand six hundred cubic feet thereof being an allowance under said treaty especially for sanitation and navigation, which volume of water shall be taken through three channels, designated as Buffalo River, Smokes Creek, and Black Rock Harbor.

SEC. 2. That the company within two years after the passage of this act shall begin the construction of the aforesaid canal without seeking from State or Nation other aid than that afforded by such cooperation as may properly be effected between Federal and State authorities; and the said company shall thereafter with due diligence prosecute the work to completion.

SEC. 3. That in consideration of the aforesaid grant said company shall give to the cities of Lackawanna, Buffalo, Tonawanda, North Tonawanda, Niagara Falls, Lockport, and all other municipalities, public and private corporations,

and individuals situate or living in what is known as the Niagara frontier the free use and perpetual right to use the said canal for sewage-disposal purposes, and for the carrying off of flood waters caused by storms.

SEC. 4. That in consideration of the facilities which it will afford to the communities, municipalities, corporations, and individuals enumerated in section three of this act the company shall have and forever enjoy the right to and possession of all the water power which it is possible to develop from the volume of water which this act permits it to withdraw from Lake Erie and cause to flow through its proposed channels into Lake Ontario.

SEC. 5. That the company shall have the right, when Buffalo River shall have been sufficiently deepened and enlarged to a junction with the proposed canal, to make a proper connection of said river with said canal, and thereafter cause the waters of Lake Erie to flow through said Buffalo River into the said canal.

And further, that the said company may make such changes and improvements in Smokes Creek, Ellicott Creek, and other streams in Erie and Niagara Counties as will permit water to enter the said streams from Lake Erie, and through them into the canal of the said company, and through the same into Lake Ontario.

And further, that the said company may build and maintain at the mouths of Smokes Creek and Eighteen Mile Creek such protecting piers and docks as may be necessary to carry out the purposes and operations of the company; all of which construction affecting navigation shall be done under the direction of the War Department.

SEC. 6. That the provisions of this law shall cease to be operative should it be judicially determined that said company has entered any conspiracy or unlawful combination or monopoly in restraint of trade.

SEC. 7. That the Secretary of War shall continue the present permits for the diversion of fifteen thousand six hundred cubic feet per second.

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NIAGARA FALLS, N. Y., *January 18, 1912.*

By Delegate F. M. Hallett:

Whereas the Committee on Foreign Affairs of the House of Representatives is at this time considering legislation on Niagara River diversion for power development; and

Whereas there is now no competition among the Niagara River power companies, with the result that exorbitant prices are charged for electric current for power and lighting purposes in this city; Therefore be it

*Resolved*, That the delegates in the Trades and Labor Council of Niagara Falls, N. Y., assembled, respectfully urge that the committee forward legislation extending the limit of Niagara River diversion from 15,600 cubic feet per second to 20,000 cubic feet per second; and

That the Committee on Foreign Affairs make provision in the pending bill to grant to the city of Niagara Falls the right to apply for a permit to divert water from the Niagara River for power purposes, so as to permit the creation of a municipal electric lighting and power plant; and be it further

*Resolved*, That a copy of this resolution be forwarded to Representative William Sulzer, of New York, chairman of the Committee on Foreign Affairs; to Representative James S. Simmons, of Niagara Falls, N. Y.; and to Representative Charles Bennett Smith, of Buffalo, N. Y., asking their efforts to forward such legislation.

JOS. P. HUNTER, *President.*  
JOHN J. NICHOLS, *Secretary.*

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THE TORONTO POWER CO. (LTD.),  
*Toronto, Ontario, January 20, 1912.*

HON. HENRY LEWIS STIMSON,  
*Secretary of War, Washington, D. C.*

DEAR SIR: Re "An act for the control of the waters of Niagara River, for the preservation of Niagara Falls, and for other purposes," and license of the Niagara Falls Electrical Transmission Co.

We understand that in the recent hearing in regard to the licenses for importing power to the United States from Canada under what is known as the Burton Act, which licenses are expiring March 1, 1912, that the statement was

made that the 48,000 horsepower allowed the Niagara Falls Electrical Transmission Co. for importation under the terms of the act was not being used, and was consequently not available for United States demand for power.

If you will be good enough to grant us the favor of an interview, we will be glad to go to Washington any time convenient to your honorable self to refute this statement.

Very truly, yours,

ROBERT J. FLEMING, *General Manager.*

[First indorsement.]

WAR DEPARTMENT,  
OFFICE OF THE SECRETARY,  
*January 22, 1912.*

Letter dated Toronto, Ontario, January 20, from Robert J. Fleming, general manager the Toronto Power Co. (Ltd.), re use of power allowed the Niagara Falls Electrical Transmission Co.

The Secretary of War wishes a report from you on this matter.

W. R. PEDIGO, *Private Secretary.*

The CHIEF OF ENGINEERS.

[Second indorsement.]

WAR DEPARTMENT,  
OFFICE OF THE CHIEF OF ENGINEERS,  
*Washington, January 23, 1912.*

1. Respectfully returned to the Secretary of War.

2. It is believed that the hearing referred to within is the one which has been in progress before the Committee on Foreign Affairs of the House of Representatives since the 16th instant, with reference to the diversion of water at Niagara Falls and the importation of electrical power from Canada, and which, it has been announced, will be resumed at 10 o'clock on the morning of the 26th instant. Representatives of different power and transmission companies have been present at the various sessions, and free expression of their views has been invited.

3. It is recommended that Mr. Fleming be informed accordingly by telegraph and that this letter be referred to Hon. William Sulzer, chairman of the House Committee on Foreign Affairs, with a statement of the action taken by the Secretary of War.

EW. D. BURR,  
*Acting Chief of Engineers.*

[Third indorsement.]

WAR DEPARTMENT, *January 24, 1912.*

Respectfully referred to Hon. William Sulzer, chairman Committee on Foreign Affairs, House of Representatives, Mr. Fleming having been advised in accordance with the recommendation of the Acting Chief of Engineers, United States Army—copy of telegram herewith.

By order of the Secretary of War:

JOHN C. SCOFFIELD,  
*Assistant and Chief Clerk.*

WASHINGTON, D. C., *February 3, 1912.*

The SECRETARY OF WAR.

DEAR SIR: Representing the Erie & Ontario Sanitary Canal Co., I offer to pay one-sixth of the cost of diffusing the waters above the Horseshoe Falls, according to plans of Isham Randolph, explained heretofore to President Taft and the engineers of the Canadian Government, provided the grant asked for by the company of 6,000 cubic feet per second is made under the terms of the treaty between the United States and Great Britain signed January 11, 1909.

Maj. Keller has recommended, in Senate Document No. 105, page 15, that similar diffusion works be paid for by the power companies, and it is to carry out the spirit of that recommendation that I make this statement.

Yours, truly,

ERIE & ONTARIO SANITARY CANAL CO.,  
By MILLARD F. BOWEN, *President.*



LA SALLE, N. Y., *January 4, 1912.*HON. WM. SULZER, M. C.,  
*Washington, D. C.*

DEAR SIR: Since the inclosed letter was written the Burton Act has been extended to March 31, 1912, thus making it doubly certain that the next session of Congress will be called upon for some solution of this great problem.

In the preparation of the accompanying letter I have made use of the reports of United States engineers, the published records of hearings before the Committees on Rivers and Harbors at Washington, and my own personal knowledge of the power situation on the Niagara frontier. I have no financial interest in or connection with any existing or prospective power company, and only desire that, with just and proper regard for vested interests of great value that can not be ignored, such legislation may now be had as will most surely promote the public welfare.

It certainly is true that the conservation and proper utilization of the nation's water power takes rank in importance with the great reclamation prospects of the West in which the Government is now wisely engaged. If in your estimation I can be of any further use in connection with the Niagara situation, I shall be glad to be considered at your service.

Very respectfully, yours,

JOHN W. WILLIAMS.

730 ELLICOTT SQUARE, *January 9, 1912.*HON. WILLIAM SULZER,  
*Washington, D. C.*

DEAR SIR: I hear that the State conservation commissioners are to be heard before your committee next Tuesday; is that a fact?

Now that the international joint commission is organized, I wish that the whole subject of the Niagara River waters could be referred to that commission; I talked with Chairman Tawney last Sunday here about it, and he was not sure of their jurisdiction; but if all agree upon a reference and join in the hearing there is no doubt of jurisdiction. As soon as rules of procedure are adopted hearings will be held, and I hope that we can get to work without delay.

Yours, very truly,

MILLARD F. BOWEN.

WERTHEIMER & DUFFY,  
302-304 Broadway, *New York, February 6, 1912.*HON. WILLIAM SULZER,  
*Chairman Foreign Relations Committee, Washington, D. C.*

MY DEAR SIR: As a citizen interested in the event, I write to bespeak your active and favorable interest in behalf of the bill which is now before your committee affecting the amount of the water which may be diverted at Niagara Falls for the purposes of power. My understanding is that this bill is intended to make effective the conditions of the recent treaty between the United States and Great Britain, and it is highly desirable that the present anomalous condition shall not be permitted to continue, but that the State of New York shall have the right to its just proportion of water, which means increased manufacturing facilities and the further development of the industries of our State. It is needless to suggest that your committee will properly protect the national interests and by proper provision secure the supervision of the War Department as to the due and proper exercise of the rights which the bill would confer. The writer trusts that your committee will promptly report the bill out, and feels that your record for disinterested public service will be enhanced by the vigorous championship of this fair and reasonable measure.

Very truly, yours,

JAS. KING DUFFY.

CLIFFORD B. HARMON & Co. (INC.),  
*New York, February 6, 1912.*HON. WILLIAM SULZER,  
*Chairman Committee on Foreign Relations, Washington, D. C.*

DEAR SIR: I understand that your committee is preparing to report out a bill determining the amount of water which may be diverted from Niagara River above the Falls for power purposes, thus making effective the recent

treaty between Great Britain and the United States. In our opinion, the maximum limitation of 20,000 cubic feet per second allowed by the treaty should be permitted to be diverted, in order that the industrial development of the State of New York may be enhanced as fully as possible. To this end it is desirable that the present Burton Act should not be continued, but that the proper officers of the State of New York should be given the right to determine to whom and in what amounts the water should be diverted, subject only to the supervision of the Secretary of War, who must necessarily have the right to determine whether or not the maximum is exceeded.

Trusting that you and the members of your committee will report out and support legislation of this character, as we believe the Conservation Commission of the State of New York are fully qualified to see that it is developed to the interests of resident users in this State, we are,

Very respectfully, yours,

CLIFFORD B. HARMON.

STATE OF NEW YORK, CONSERVATION COMMISSION,  
*Albany, January 17, 1912.*

HON. WILLIAM SULZER,  
*Chairman Committee on Foreign Affairs, Washington, D. C.*

DEAR MR. SULZER: We are in receipt of your valued favor of January 15 relative to your committee having fixed next Tuesday, the 23d instant, at 10 o'clock a. m., to hear the representatives of the State of New York, and thank you for having advised us.

Very truly, yours,

CONSERVATION COMMISSION,  
By ALBERT E. HOTT,  
*Secretary to Commission.*

COMMITTEE ON EXPENDITURES IN THE TREASURY DEPARTMENT,  
UNITED STATES SENATE,  
*Washington, January 18, 1912.*

HON. WILLIAM SULZER,  
*House of Representatives.*

MY DEAR MR. SULZER: I have your kind invitation to appear before the committee in regard to Niagara Falls. I shall probably wish to say something on this subject, if you can afford opportunity before you come to a final conclusion. I would rather wait until the views of the others are presented.

Yours, very respectfully,

T. E. BURTON.

CHAMBER OF COMMERCE AND MANUFACTURERS' CLUB,  
*Buffalo, January 24, 1912.*

HON. WILLIAM SULZER,  
*Chairman Committee on Foreign Affairs,  
House of Representatives, Washington, D. C.*

DEAR SIR: Referring to report in newspapers that the statement has been made to you that the public-service commission is unable to cope with the situation of charges by electrical companies for power, I desire to say that such is not the opinion of this body, and to express to you on the contrary that we believe that the machinery devised and in successful operation for the control of public-service corporations in general, and of the electrical situation in particular, is entirely adequate to deal with the subject, and I desire further to state that this is the general feeling in this community.

This body has originated and promoted an investigation into the changes made in Buffalo for electrical power, which is now pending. It desires to secure for its citizens a readjustment and in many cases a reduction of present charges, and it is satisfied with the tribunal established by law to decide the issue.

In conclusion, I beg leave earnestly and cordially to repeat the invitation extended to your committee to visit the Niagara frontier and gather the facts at first hand.

Yours, respectfully,

CHAMBER OF COMMERCE AND MANUFACTURERS' CLUB,  
By EDGAR C. NEAL,  
*Vice President and Acting President.*

LA SALLE, N. Y., January 15, 1912.

Hon. WM. SULZER, M. C.,

*Chairman House Committee on Foreign Affairs, Washington, D. C.*

MY DEAR SIR: I regret very much being unable to attend the hearing on Niagara power before your committee on Tuesday, but wish to present for your consideration a few facts regarding the situation.

The Hydraulic Power Co., of Niagara Falls, will undoubtedly make a strong effort at this session of Congress to secure for its own use nearly all the remaining 4,400 cubic feet of water permitted by the treaty. On the basis of present effective use of Niagara waters for power development this company undoubtedly has a paramount claim. I think, however, certain other things should be known before so valuable a grant of public property is made.

1. The Hydraulic Power Co. is a close corporation, all the stockholders (so far as known) being members of one family.

2. Its property rights were acquired at sheriff's sale at a price far below their actual value of cost.

3. It is also true that the location of its plant and character of its development have done more than all others to destroy the beauties of nature near the cataract.

4. The Hydraulic Power Co. can not now be earning less than 20 per cent net annually on its entire investment. This will be greatly increased if their appeal is now granted.

May I suggest and urge that before any additional water is granted to this or any other company its affairs be fully investigated and a sworn statement of its present earnings and profits be laid before Congress.

If this is done I believe if any additional grant is made it will be conditioned upon a liberal return to the Government as grantor of property in this case unquestionably worth many millions to the grantees.

Otherwise, and in any event, it seems to me it would be far wiser and more conducive to the public good if this request for additional water by private corporations was denied. In my judgment the only proper course is to remove all restrictions on the importation of power from Canada, and then use the remaining water on this side to develop the greatest possible amount of power. Having already fully presented my views along this line in a previous letter, it seems unnecessary to add more at this time.

Thanking you for the notice sent me and assuring you of my continued high regard, I am,

Very sincerely, yours,

JOHN W. WILLIAMS.

P. S.—Four thousand four hundred feet of water will develop, at Devils Hole, 109,000 horsepower; at Hydraulic Power Co., 85,000 horsepower; at Niagara Falls Power Co., 58,000 horsepower.

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[Telegrams.]

ALBANY, N. Y., January 17.

Hon. WILLIAM SULZER,

*Chairman Committee on Foreign Affairs,  
House of Representatives, Washington, D. C.:*

Please telegraph immediately day and hour to which your committee adjourned yesterday's hearing on Smith Niagara Falls bill.

NEW YORK STATE CONSERVATION COMMISSION.

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WASHINGTON, D. C., January 17, 1912.

NEW YORK CONSERVATION COMMISSION,  
*Capitol, Albany, N. Y.:*

Hearings on Niagara bills will be continued to-morrow morning and Saturday. Representatives of the State of New York will be heard next Tuesday morning 10 o'clock. All information sent to Attorney General Carmody and the governor.

WM. SULZER.

WASHINGTON, D. C., *January 16, 1912.*

Hon. JOHN A. DIX, *Albany, N. Y.:*

By arrangement with Attorney General Carmody the Committee on Foreign Affairs will hear the representatives of the State of New York on the Niagara Falls power bills next Tuesday morning, January 23, instant.

WM. SULZER.

WASHINGTON, D. C., *January 13, 1912.*

Hon. JOHN A. MASON,

*Secretary to the Governor, Albany, N. Y.:*

The hearing on the bills relating to the Niagara water power has been fixed by the Committee on Foreign Affairs for the 16th instant at 10 o'clock in the morning. The committee is anxious to hear the representatives of the State. If they can not be present on the 16th, I think I can get an adjournment until the later part of the week, say 18th or 19th, if this will be more convenient to the representatives of the State of New York. Please advise. Do not want to close the hearing until you have ample opportunity to be heard.

WM. SULZER.

STATE OF NEW YORK,  
PUBLIC-SERVICE COMMISSION, SECOND DISTRICT.  
*Albany, January 12, 1912.*

Hon. WILLIAM SULZER.

*Chairman Committee on Foreign Affairs,*

*House of Representatives, Washington, D. C.*

DEAR SIR: Your letter of January 10 in relation to a hearing to be held before your committee on Tuesday, the 16th instant, in relation to bills introduced by Congressmen Smith and Simmons relating to Niagara Falls has been received and a copy transmitted to each member of the commission.

Yours, very truly,

J. C. KENNY, *Secretary.*

AMERICAN CIVIC ASSOCIATION,  
OFFICE OF THE PRESIDENT,  
*Harrisburg, Pa., January 12, 1912.*

Hon. WILLIAM SULZER.

*House of Representatives, Washington, D. C.*

DEAR SIR: I am in receipt of a letter from your secretary under date of January 10 informing me of the hearing arranged for Tuesday morning next, January 16, at 10 o'clock, on bills pending before the Committee on Foreign Affairs, having relation to the use of the water of Niagara River for power production.

I thank you heartily for your courtesy in thus notifying me, and inform you with deep regret that it is impracticable for me to be present, owing to preceding engagements which, in justice to others, I can not break. I must be in Chicago on the morning of January 17, to do which it is necessary to leave Harrisburg on the afternoon of January 16, and I have several imperative engagements here in the meantime for Monday and Tuesday.

The matter upon which you are to pass is of very great importance. So far as I know the American Civic Association is the only organization likely to appear for the interests of the public, while there can be no doubt as to the presence on the occasion mentioned of those serving the special interests involved. I regret it has not been practicable to give a longer notice of the hearing.

Our secretary, Mr. Watrous, will be present, and I have no doubt will adequately represent the association, or at least as adequately as can be done under the circumstances of short notice. I have asked him by telephone to see that the bills which are to be considered are forwarded to me to-day.

I respectfully ask that the proceedings of the committee be not only reported as usual, but that provision be made for printing them. The legislation under

consideration has to do with matters of monumental interest and importance, and it is extremely desirable that access be had to the statements made at the hearing.

Yours, truly,

J. HORACE McFARLAND,  
*President.*

STATE OF NEW YORK,  
OFFICE OF THE ATTORNEY GENERAL,  
Albany, January 12, 1912.

HON. WILLIAM SULZER,  
*Member of Congress, Washington, D. C.*

DEAR CONGRESSMAN: The State engineer and myself have just had a conference with the governor in regard to the proposed hearing upon the Niagara Falls Power Co. bill. The governor is sending you a telegram this afternoon suggesting the arrangement of a convenient date later when the conservation commission, the State engineer's department, and the attorney general's department may appear and make known the attitude of the State in regard to this bill. At present you know the whole question of water, power, conservation, and distribution is unsettled in this State. The conservation commission is working upon a policy which is not ready yet for adoption. It is necessary, therefore, for us to have some additional time for a further conference so that we may be prepared to announce the policy of the State while this bill is in committee. We will not ask for any adjournment that will embarrass Congress, but would like very much to have the matter deferred until possibly early in February. I simply suggest this date in a haphazard way, but think if you will fix a date along about that time we may be able to appear and express the policy of the State upon the subject involved in the bill.

I will deem this an official as well as a personal courtesy.

Yours, very respectfully,

THOMAS CARMODY, *Attorney General.*

*To the Senate and House of Representatives:*

The act of Congress approved June 20, 1906, "For the control and regulation of the waters of Niagara River, for the preservation of Niagara Falls, and for other purposes," committed certain duties to the Secretary of War which required extensive scientific investigations in order to obtain the information essential to intelligent action. In accordance with a recommendation of the Secretary of War contained in a letter to me on the 19th instant, I am transmitting herewith for the information of Congress reports of those investigations made by the officer in charge of the survey of the northern and north-western lakes, dated November 30, 1908, and September 21, 1909, which, as explained in the letter of the Secretary of War, also transmitted herewith, have hitherto been retained for the assistance of the executive branch of the Government.

A final report of the proceedings of the War Department in connection with the act referred to will be included in the forthcoming annual report.

WM. H. TAFT.

The WHITE HOUSE, August 21, 1911.

WAR DEPARTMENT,  
Washington, August 19, 1911.

*The PRESIDENT:*

The act of Congress approved June 20, 1906, "For the control and regulation of the waters of Niagara River, for the preservation of Niagara Falls, and for other purposes," authorized the Secretary of War to grant permits for the diversion of water from the Niagara River for the creation of power to an aggregate amount of 15,000 cubic feet per second, and it also authorized him to grant permits for the diversion of additional amounts of water for power purposes after the approximate amount of 15,600 feet per second had been diverted for a period of not less than six months, but only to such additional

amount, "if any, as in connection with the amount diverted on the Canadian side shall not injure or interfere with the navigable capacity of said river, or its integrity and proper volume as a boundary stream, or the scenic grandeur of Niagara Falls."

It was early recognized that the information necessary for intelligent action upon matters of such complex character could only be acquired by extended observations of a precise and difficult nature, and the local study of the questions involved was therefore assigned soon after the approval of the act to the officer in charge of the survey of the northern and northwestern lakes, then conducting operations in the vicinity of Niagara Falls.

Comprehensive and valuable reports on the subject submitted by that officer November 30, 1908, and September 21, 1909, have hitherto been retained for the assistance of the executive branch of the Government, but as the provisions of the act of June 29, 1906, as extended by the joint resolution approved June 3, 1909, expired by limitation on the 29th of June last, and as the executive departments have no further duty to perform in connection with that act, I submit herewith the reports in question and recommend that they now be transmitted to Congress.

A final report of the proceedings under the provisions of the act referred to will be included with my forthcoming annual report.

Very respectfully,

HENRY L. STIMSON,  
*Secretary of War.*

#### MEMORANDUM CONCERNING THE RESTRICTIONS ON THE USE OF NIAGARA POWER.

First. The campaign for the purpose of preserving the scenic grandeur of Niagara Falls was begun by the American Civic Association in the summer of 1905. The association asserted that Niagara Falls had been seriously injured by the power companies, and unless legislation was enacted by Congress the Falls would speedily be entirely ruined. The annual meeting of the association was held at Cleveland in the autumn of 1905, and the association secured the support of Mr. Burton, then Member of Congress from that district. The President of the United States in his annual message to Congress briefly recommended that legislation be enacted to preserve the Falls from destruction. The association procured the signatures, it is said, of 100,000 people asking for such legislation. Soon after the meeting of Congress Mr. Burton introduced his bill, entitled "An act for the control and regulation of the waters of Niagara River, for the preservation of Niagara Falls, and for other purposes." Numerous hearings were held before the Rivers and Harbors Committee, of which Mr. Burton was then chairman, at which the constitutionality of the proposed legislation, the necessity for it, and the form of it were elaborately argued.

The bill was passed and approved by the President on June 29, 1906. It was to remain in force for three years, but on March 3, 1909, it was, by joint resolution, extended for two years.

Unless further extended it will expire by limitation on June 29, 1911.

Second. Section 4 of the act requested the President of the United States to negotiate a treaty with the Government of Great Britain, providing "for such regulation and control of the waters of Niagara River and its tributaries as will preserve the scenic grandeur of Niagara Falls, and of the rapids in said river." Such a treaty was negotiated, ratified by the Senate on March 3, 1909, ratified by Great Britain in March, 1910, and proclaimed by the President to be in force from and after May 13, 1910.

Third. The treaty is the supreme law of the land. The Burton law is in some respects inconsistent with the treaty.

The Burton law restricts the diversion of water on the American side to 15,600 cubic feet per second; the treaty raises the limit of restriction to 20,000 cubic feet per second.

The Burton law places restrictions upon the amount of power which can be transmitted into the United States from Canada; the treaty makes no restriction on the transmission of power from Canada into the United States.

Under these circumstances Mr. Alexander, Member of Congress from Buffalo, introduced a bill in June, 1910, amending the Burton law so as to make it

comply with the terms of the treaty, and extending the operations of the Burton law thus amended so long as the treaty remains in force. The Alexander bill increases the amount of water which can be diverted on the American side from 15,600 cubic feet per second to 20,000 cubic feet per second; and it leaves out of the bill all restrictions upon the transmission of power from Canada into the United States. In other respects the original Burton law is not changed. The original law was intended, in pursuance of its purpose to preserve Niagara Falls, to prevent any new power projects from being started at Niagara; and it therefore stipulated that the permits, which under the law the Secretary of War was authorized to issue for the diversion of water on the American side, should be issued only to those individuals, companies, or corporations which were at that time actually producing power "from the waters of said river, or its tributaries, in the State of New York, or from the Erie Canal." The original law also prescribed penalties of fine and imprisonment for violations of the law, and gave jurisdiction over such cases to the United States circuit court. These provisions in identical language are repeated in the Alexander bill, which is simply the Burton law amended to accord with the treaty.

This bill failed to pass. On April 20, 1911, Senator Root introduced a bill [S. 1490] to give effect to the treaty, and the bill is now pending.

Fourth. Prior to the introduction of the Burton law two American and three Canadian corporations, acting on the faith of laws enacted and contracts made by and with the State of New York, the Province of Ontario, and the Dominion of Canada, had undertaken the construction of five extensive projects for the development of power, three of them on the Canadian and two of them on the American side. At that time upward of \$30,000,000 had been expended on these projects, which were all of them incomplete; but relying on the rights granted to them by the public authorities on both sides of the river, the companies had made their plans and entered into contracts, which would have entailed enormous financial loss, if not entire ruin, unless the companies had been permitted to carry out these projects. It was quite clearly shown in the hearings before the Burton committee that the diversion of the water necessary to carry out to their full extent the projects which then were only partially completed, would not result in any serious injury to the scenic grandeur of Niagara Falls. Nevertheless the Burton law only provided for the partial completion of these projects. Its restrictions upon the diversion of water on the American side and the transmission of power from the Canadian side were such that the companies would only have been able partially to complete their projects. This injustice and inequity were remedied by the treaty, which was the result of negotiations extending over nearly two years in which the whole subject was thoroughly examined with the aid of Government experts on both sides. The treaty carries out the original purpose of the Burton Act to preserve the scenic grandeur of Niagara Falls by preventing any new power enterprises, but it permits the companies which had expended such enormous sums of money to carry out the plans which they had formed on the faith of the law as it stood when such plans were made. These plans contemplated the use of a small portion of the waters of Niagara for the delivery of cheap electrical power to the people of central and western New York, nearly 2,500,000 in number, occupying a broad belt more than 200 miles in length between Utica and Dunkirk. Buffalo and the entire Niagara frontier from Niagara Falls to the steel industries at Lackawanna, as well as the cities of Rochester, Syracuse, Auburn, Lockport, Jamestown, Dunkirk, Batavia, and many smaller communities are vitally interested in seeing that this treaty is carried into effect, and that it should no longer be practically nullified by the Burton law in its present form.

Unless the treaty is given full effect the industries of central and western New York will be seriously crippled and their development arrested, because the companies which now have transmission lines of a total length of 500 miles, supplying Niagara power to these industries, have about reached the limit of the power which they can obtain unless the Alexander bill is enacted into law.

Fifth. The average flow of the Niagara River, as determined by the observations of the United States engineers extending over a period of 51 years, is 212,000 cubic feet per second. The treaty authorizes 20,000 cubic feet to be taken out above the Falls on the American side and 36,000 cubic feet on the Canadian side, a total of 56,000 cubic feet, or about one-fourth of the entire amount.

The amount of power which can be produced by 1 cubic foot per second varies among the different power companies from 9 horsepower to 17 horse-

power, depending upon where the water is taken and the nature of the installation. The average is a little less than 13 horsepower per cubic foot. The total amount of power which could be developed at Niagara on the basis of using all of the average flow of the river is therefore about 2,750,000 horsepower, and the amount of power that can be developed under the restrictions imposed by the treaty will be less than 700,000 horsepower. The present installation at the Falls is approximately 400,000 horsepower, which will shortly be increased to about 450,000 horsepower.

Sixth. Elaborate measurements taken by the United States engineers in 1908, at a time when the American power houses were all temporarily shut down, show that the difference in depth in the water passing over the American Fall when the power houses are in operation and when not a wheel is turning is only a fraction of an inch. This is determined by minute and complicated scientific measurements. It is not visible to the eye, and it has no effect upon the scenic grandeur of Niagara Falls.

In Exhibit D are reproductions of photographs of the Falls taken in 1876, 1885, and 1888, when there were no electric-power plants; in 1900 and 1905, when the amount of power in use was about 100,000 horsepower; and in 1910, when the amount was more than 330,000 horsepower. These photographs show that under similar conditions, in spite of an increasing diversion of water for power purposes, the appearance of the Falls presents no change which can be detected by the eye. It can be confidently asserted that, under the restrictions imposed by the treaty, it will require scientific measurements to detect the change in the depth of the water at the Falls, but that this change will not be visible to the eye. The scenic grandeur of Niagara Falls will be preserved unimpaired.

Seventh. The production of 1 horsepower continuously for 24 hours throughout every day in the year requires the consumption, under the most improved and modern apparatus, of about 13 tons of coal per annum. The treaty has decided that about 700,000 horsepower can be taken from Niagara without affecting its scenic grandeur. To produce this amount of power by coal would require about 8,500,000 tons of coal per annum. This is a comparatively small portion of the 450,000,000 tons of coal consumed in the United States every year, but it is still worth saving. There is absolutely no destruction of natural resources in the use of falling water for producing power. The eternal laws of gravity, evaporation, and precipitation form a cycle in which the sun's heat is the ultimate source of energy; and in this cycle the loss of such energy is inappreciable, and can not be measured by any instruments or methods known to man.

The scenic grandeur of Niagara appeals to the imagination as a manifestation of overwhelming force. The utilization of a small portion of this titanic force by the wit and brain of man for the benefit of his fellow men equally appeals to the imagination; and the thousands of visitors who annually go through the different power houses are quite as much impressed by the evidences which they there see of mechanical ingenuity and of the control by man over gigantic force as they are by the spectacle of this gigantic force going to waste.

Eighth. The treaty runs for five years from May, 1910, and thereafter until terminated by either country on one year's notice. It has determined and fixed, after the most careful consideration, the restrictions which, so long as the treaty remains in force, are placed upon the use of Niagara water for power purposes.

Under the contracts made with the Canadian authorities by the Canadian power companies one-half of the power generated in Canada can be transmitted to the United States. The Burton law undertakes to nullify these contracts by limiting the amount of power which could be brought in from Canada. The treaty, recognizing that no harm could be done to Canada and much good could be done to the United States by bringing in this surplus power from Canada, placed no restrictions upon the transmission of power from Canada, so that the manufacturers of western New York might have the benefit of all the power which, under their agreements with the Canadian authorities, the Canadian power companies can send here.

It only remains to enact such legislation as will give full force and effect to the treaty.

FRANCIS V. GREENE.



## EXHIBIT A.

## THE BURTON LAW.

AN ACT For the control and regulation of the waters of Niagara River, for the preservation of Niagara Falls, and for other purposes. [Public—No. 367.]

*Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,* That the diversion of water from Niagara River or its tributaries, in the State of New York, is hereby prohibited, except with the consent of the Secretary of War as hereinafter authorized in section 2 of this act: *Provided*, That this prohibition shall not be interpreted as forbidding the diversion of the waters of the Great Lakes or of Niagara River for sanitary or domestic purposes, or for navigation, the amount of which may be fixed from time to time by the Congress of the United States, or by the Secretary of War of the United States under its direction.

SEC. 2. That the Secretary of War is hereby authorized to grant permits for the diversion of water in the United States from said Niagara River or its tributaries for the creation of power to individuals, companies, or corporations which are now actually producing power from the waters of said river, or its tributaries, in the State of New York, or from the Erie Canal; also permits for the transmission of power from the Dominion of Canada into the United States, to companies legally authorized therefor, both for diversion and transmission, as hereinafter stated, but permits for diversion shall be issued only to the individuals, companies, or corporations as aforesaid, and only to the amount now actually in use or contracted to be used in factories the buildings for which are now in process of construction, not exceeding to any one individual, company, or corporation as aforesaid a maximum amount of 8,000 cubic feet per second, and not exceeding to all individuals, companies, or corporations as aforesaid an aggregate amount of 15,600 cubic feet per second; but no revocable permits shall be issued by the said Secretary under the provisions hereafter set forth for the diversion of additional amounts of water from the said river or its tributaries until the approximate amount for which permits may be issued as above, to wit, 15,600 cubic feet per second, shall for a period of not less than six months have been diverted from the waters of said river or its tributaries, in the State of New York: *Provided*, That the said Secretary, subject to the provisions of section 5 of this act, under the limitations relating to time above set forth, is hereby authorized to grant revocable permits from time to time to such individuals, companies, or corporations, or their assigns, for the diversion of additional amounts of water from the said river or its tributaries to such amount, if any, as, in connection with the amount diverted on the Canadian side, shall not injure or interfere with the navigable capacity of said river or its integrity and proper volume as a boundary stream or the scenic grandeur of Niagara Falls; and that the quantity of electrical power which may by permits be allowed to be transmitted from the Dominion of Canada into the United States shall be 160,000 horsepower: *Provided further*, That the said Secretary, subject to the provisions of section 5 of this act, may issue revocable permits for the transmission of additional electrical power so generated in Canada, but in no event shall the amount included in such permits, together with the said 160,000 horsepower and the amount generated and used in Canada, exceed 350,000 horsepower: *Provided always*, That the provisions herein permitting diversions and fixing the aggregate horsepower herein permitted to be transmitted into the United States as aforesaid are intended as a limitation on the authority of the Secretary of War, and shall in no wise be construed as a direction to said Secretary to issue permits, and the Secretary of War shall make regulations preventing or limiting the diversion of water and the admission of electrical power as herein stated; and the permits for the transmission of electrical power issued by the Secretary of War may specify the persons, companies, or corporations by whom the same shall be transmitted and the persons, companies, or corporations to whom the same shall be delivered.

SEC. 3. That any person, company, or corporation diverting water from the said Niagara River or its tributaries, or transmitting electrical power into the United States from Canada, except as herein stated, or violating any of the provisions of this act, shall be deemed guilty of a misdemeanor, and on conviction thereof shall be punished by a fine not exceeding \$2,500 nor less than \$500, or by imprisonment (in the case of a natural person) not exceeding one year, or by both such punishments, in the discretion of the court. And, further, the removal of any structures or parts of structures erected in violation of

this act, or any construction incidental to or used for such diversion of water or transmission of power as is herein prohibited, as well as any diversion of water or transmission of power in violation hereof, may be enforced or enjoined at the suit of the United States by any circuit court having jurisdiction in any district in which the same may be located, and proper proceedings to this end may be instituted under the direction of the Attorney General of the United States.

SEC. 4. That the President of the United States is respectfully requested to open negotiations with the Government of Great Britain for the purpose of effectually providing, by suitable treaty with said Government, for such regulation and control of the waters of Niagara River and its tributaries as will preserve the scenic grandeur of Niagara Falls and of the rapids in said river.

SEC. 5. That the provisions of this act shall remain in force for three years from and after date of its passage, at the expiration of which time all permits granted hereunder by the Secretary of War shall terminate unless sooner revoked, and the Secretary of War is hereby authorized to revoke any or all permits granted by him by authority of this act, and nothing herein contained shall be held to confirm, establish, or confer any rights heretofore claimed or exercised in the diversion of water or the transmission of power.

SEC. 6. That for accomplishing the purposes detailed in this act the sum of \$50,000, or so much thereof as may be necessary, is hereby appropriated from any moneys in the Treasury not otherwise appropriated.

SEC. 7. That the right to alter, amend, or repeal this act is hereby expressly reserved.

Approved, June 29, 1906.

JOINT RESOLUTION Extending the operation of an act for the control and regulation of the waters of Niagara River, for the preservation of Niagara Falls, and for other purposes. [Public—H. J. Res. 262.]

Whereas the provisions of the act entitled "An act for the control and regulation of the waters of Niagara River, for the preservation of Niagara Falls, and for other purposes," approved June 29, 1906, will expire by limitation on June 29, 1910; and

Whereas a date for the termination of the operation of said act was provided therein, but with a view to the more permanent settlement of the questions involved by a treaty with Great Britain, and by further legislation appropriate to the situation and such treaty not having been negotiated, it is desirable that the provisions of said act should be continued until such permanent settlement can be made: Therefore be it

*Resolved, etc.,* That the provisions of the aforesaid act be, and they are hereby, extended for two years from June 29, 1909, being the date of the expiration of the operation of said act, save in so far as any portion thereof may be found inapplicable or already complied with.

Approved, March 3, 1909.

#### EXHIBIT B.

#### TREATY BETWEEN THE UNITED STATES AND GREAT BRITAIN—BOUNDARY WATERS BETWEEN THE UNITED STATES AND CANADA.

[Signed at Washington, January 11, 1909. Ratification advised by the Senate March 3, 1909. Ratified by the President April 1, 1909. Ratified by Great Britain March 31, 1910. Ratifications exchanged at Washington, May 5, 1910. Proclaimed May 13, 1910.]

#### *A proclamation by the President of the United States of America:*

Whereas a treaty between the United States of America and His Majesty the King of United Kingdom of Great Britain and Ireland and of the British Dominions beyond the Seas, Emperor of India, to prevent disputes regarding the use of boundary waters and to settle all questions which are now pending between the United States and the Dominion of Canada involving the rights, obligations, or interests of either in relation to the other or to the inhabitants of the other, along their common frontier, and to make provision for the adjustment and settlement of all such questions as may hereafter arise, was concluded and signed by their respective plenipotentiaries at Washington on the 11th day of January, 1909, the original of which treaty is word for word as follows:

The United States of America and His Majesty the King of the United Kingdom of Great Britain and Ireland and of the British Dominions beyond the seas, Emperor of India, being equally desirous to prevent disputes regarding the use of boundary waters and to settle all questions which are now pending between the United States and the Dominion of Canada involving the rights, obligations, or interests of either in relation to the other or to the inhabitants of the other, along their common frontier, and to make provision for the adjustment and settlement of all such questions as may hereafter arise, have resolved to conclude a treaty in furtherance of these ends, and for that purpose have appointed as their respective plenipotentiaries:

The President of the United States of America; Elihu Root, Secretary of State of the United States; and

His Britannic Majesty, the Right Hon. James Bryce, O. M., his ambassador extraordinary and plenipotentiary at Washington;

Who, after having communicated to one another their full powers, found in good and due form, have agreed upon the following articles:

**PRELIMINARY ARTICLE.** For the purposes of this treaty boundary waters are defined as the waters from main shore to main shore of the lakes and rivers and connecting waterways, or the portions thereof, along which the international boundary between the United States and the Dominion of Canada passes, including all bays, arms, and inlets thereof, but not including tributary waters which in their natural channels would flow into such lakes, rivers, and waterways, or waters flowing from such lakes, rivers, and waterways, or the waters of rivers flowing across the boundary.

**ARTICLE I.** The high contracting parties agree that the navigation of all navigable boundary waters shall forever continue free and open for the purposes of commerce to the inhabitants and to the ships, vessels, and boats of both countries equally, subject, however, to any laws and regulations of either country, within its own territory, not inconsistent with such privilege of free navigation and applying equally and without discrimination to the inhabitants, ships, vessels, and boats of both countries.

It is further agreed that so long as this treaty shall remain in force this same right of navigation shall extend to the waters of Lake Michigan and to all canals connecting boundary waters and now existing or which may hereafter be constructed on either side of the line. Either of the high contracting parties may adopt rules and regulations governing the use of such canals within its own territory and may charge tolls for the use thereof, but all such rules and regulations and all tolls charged shall apply alike to the subjects or citizens of the high contracting parties and the ships, vessels, and boats of both of the high contracting parties, and they shall be placed on terms of equality in the use thereof.

**ART. II.** Each of the high contracting parties reserves to itself or to the several State governments on the one side and the Dominion or Provincial governments on the other, as the case may be, subject to any treaty provisions now existing with respect thereto, the exclusive jurisdiction and control over the use and diversion, whether temporary or permanent, of all waters on its own side of the line which in their natural channels would flow across the boundary or into boundary waters; but it is agreed that any interference with or diversion from their natural channel of such waters on either side of the boundary, resulting in any injury on the other side of the boundary, shall give rise to the same rights and entitle the injured parties to the same legal remedies as if such injury took place in the country where such diversion or interference occurs; but this provision shall not apply to cases already existing or to cases expressly covered by special agreement between the parties hereto.

It is understood, however, that neither of the high contracting parties intends by the foregoing provision to surrender any right which it may have to object to any interference with or diversions of waters on the other side of the boundary the effect of which would be productive of material injury to the navigation interests on its own side of the boundary.

**ART. III.** It is agreed that, in addition to the uses, obstructions, and diversions heretofore permitted or hereafter provided for by special agreement between the parties hereto, no further or other uses or obstructions or diversions, whether temporary or permanent, of boundary waters on either side of the line, affecting the natural level or flow of boundary waters on the other side of the line, shall be made except by authority of the United States or the Dominion of Canada within their respective jurisdictions and with the approval, as hereinafter provided, of a joint commission, to be known as the International Joint Commission.

The foregoing provisions are not intended to limit or interfere with the existing rights of the Government of the United States on the one side and the Government of the Dominion of Canada on the other, to undertake and carry on governmental works in boundary waters for the deepening of channels, the construction of breakwaters, the improvement of harbors, and other governmental works for the benefit of commerce and navigation, provided that such works are wholly on its own side of the line and do not materially affect the level or flow of the boundary waters on the other, nor are such provisions intended to interfere with the ordinary use of such waters for domestic and sanitary purposes.

ART. IV. The high contracting parties agree that, except in cases provided for by special agreement between them, they will not permit the construction or maintenance on their respective sides of the boundary of any remedial or protective works or any dams or other obstructions in waters flowing from boundary waters or in waters at a lower level than the boundary in rivers flowing across the boundary, the effect of which is to raise the natural level of waters on the other side of the boundary, unless the construction or maintenance thereof is approved by the aforesaid international joint commission.

It is further agreed that the waters herein defined as boundary waters and waters flowing across the boundary shall not be polluted on either side to the injury of health or property on the other.

ART. V. The high contracting parties agree that it is expedient to limit the diversion of waters from the Niagara River so that the level of Lake Erie and the flow of the stream shall not be appreciably affected. It is the desire of both parties to accomplish this object with the least possible injury to investments which have already been made in the construction of power plants on the United States side of the river under grants of authority from the State of New York, and on the Canadian side of the river under licenses authorized by the Dominion of Canada and the Province of Ontario.

So long as this treaty shall remain in force, no diversion of the waters of the Niagara River above the Falls from the natural course and stream thereof shall be permitted except for the purposes and to the extent hereinafter provided.

The United States may authorize and permit the diversion within the State of New York of the waters of said river above the Falls of Niagara, for power purposes, not exceeding in the aggregate a daily diversion at the rate of 20,000 cubic feet of water per second.

The United Kingdom, by the Dominion of Canada, or the Province of Ontario, may authorize and permit the diversion within the Province of Ontario of the waters of said river above the Falls of Niagara, for power purposes, not exceeding in the aggregate a daily diversion at the rate of 36,000 cubic feet of water per second.

The prohibitions of this article shall not apply to the diversion of water for sanitary or domestic purposes, or for the service of canals for the purposes of navigation.

ART. VI. The high contracting parties agree that the St. Mary and Milk Rivers and their tributaries (in the State of Montana and the Provinces of Alberta and Saskatchewan) are to be treated as one stream for the purposes of irrigation and power, and the waters thereof shall be apportioned equally between the two countries, but in making such equal apportionment, more than half may be taken from one river and less than half from the other by either country so as to afford a more beneficial use to each. It is further agreed that in the division of such waters during the irrigation season, between the 1st of April and 31st of October, inclusive, annually, the United States is entitled to a prior appropriation of 500 cubic feet per second of the waters of the Milk River, or so much of such amount as constitutes three-fourths of its natural flow, and that Canada is entitled to a prior appropriation of 500 cubic feet per second of the flow of St. Mary River, or so much of such amount as constitutes three-fourths of its natural flow.

The channel of the Milk River in Canada may be used at the convenience of the United States for the conveyance, while passing through Canadian territory, of waters diverted from the St. Mary River. The provisions of Article II of this treaty shall apply to any injury resulting to property in Canada from the conveyance of such waters through the Milk River.

The measurement and apportionment of the water to be used by each country shall from time to time be made jointly by the properly constituted reclamation officers of the United States and the properly constituted irrigation officers of His Majesty under the direction of the international joint commission.

ART. VII. The high contracting parties agree to establish and maintain an international joint commission of the United States and Canada composed of six commissioners, three on the part of the United States appointed by the President thereof, and three on the part of the United Kingdom appointed by His Majesty on the recommendation of the governor in council of the Dominion of Canada.

ART. VIII. This international joint commission shall have jurisdiction over and shall pass upon all cases involving the use or obstruction or diversion of the waters with respect to which under Articles III and IV of this treaty the approval of this commission is required, and in passing upon such cases the commission shall be governed by the following rules or principles, which are adopted by the high contracting parties for this purpose:

The high contracting parties shall have, each on its own side of the boundary, equal and similar rights in the use of the waters hereinbefore defined as boundary waters.

The following order of precedence shall be observed among the various uses enumerated hereinafter for these waters, and no use shall be permitted which tends materially to conflict with or restrain any other use which is given preference over it in this order of precedence:

(1) Uses for domestic and sanitary purposes.

(2) Uses for navigation, including the service of canals for the purposes of navigation.

(3) Uses for power and for irrigation purposes.

The foregoing provisions shall not apply to or disturb any existing uses of boundary waters on either side of the boundary.

The requirement for an equal division may in the discretion of the commission be suspended in cases of temporary diversions along boundary waters at points where such equal division can not be made advantageously on account of local conditions, and where such diversion does not diminish elsewhere the amount available for use on the other side.

The commission in its discretion may make its approval in any case conditional upon the construction of remedial or protective works to compensate so far as possible for the particular use or diversion proposed, and in such cases may require that suitable and adequate provision, approved by the commission, be made for the protection and indemnity against injury of any interests on either side of the boundary.

In cases involving the elevation of the natural level of waters on either side of the line as a result of the construction or maintenance on the other side of remedial or protective works or dams or other obstructions in boundary waters or in waters flowing therefrom or in waters below the boundary in rivers flowing across the boundary, the commission shall require, as a condition of its approval thereof, that suitable and adequate provision, approved by it, be made for the protection and indemnity of all interests on the other side of the line which may be injured thereby.

The majority of the commissioners shall have power to render a decision. In case the commission is evenly divided upon any question or matter presented to it for decision, separate reports shall be made by the commissioners on each side to their own Government. The high contracting parties shall thereupon endeavor to agree upon an adjustment of the question or matter of difference, and if an agreement is reached between them, it shall be reduced to writing in the form of a protocol, and shall be communicated to the commissioners, who shall take such further proceedings as may be necessary to carry out such agreement.

ART. IX. The high contracting parties further agree that any other questions or matters of difference arising between them involving the rights, obligations, or interests of either in relation to the other or to the inhabitants of the other, along the common frontier between the United States and the Dominion of Canada, shall be referred from time to time to the international joint commission for examination and report, whenever either the Government of the United States or the Government of the Dominion of Canada shall request that such questions or matters of difference be so referred.

The international joint commission is authorized in each case so referred to examine into and report upon the facts and circumstances of the particular questions and matters referred, together with such conclusions and recommendations as may be appropriate, subject, however, to any restrictions or exceptions which may be imposed with respect thereto by the terms of the reference.

Such reports of the commission shall not be regarded as decisions of the questions or matters so submitted, either on the facts or the law, and shall in no way have the character of an arbitral award.

The commission shall make a joint report to both Governments in all cases in which all or a majority of the commissioners agree, and in case of disagreement the minority may make a joint report to both Governments or separate reports to their respective Governments.

In case the commission is evenly divided upon any question or matter referred to it for report, separate reports shall be made by the commissioners on each side to their own Government.

ART. X. Any questions or matters of difference arising between the high contracting parties involving the rights, obligations, or interests of the United or of the Dominion of Canada, either in relation to each other or to their respective inhabitants, may be referred for decision to the international joint commission by the consent of the two parties, it being understood that on the part of the United States any such action will be by and with the advice and consent of the Senate, and on the part of His Majesty's Government with the consent of the Governor General in Council. In each case so referred, the said commission is authorized to examine into and report upon the facts and circumstances of the particular questions and matters referred, together with such conclusions and recommendations as may be appropriate, subject, however, to any restrictions or exceptions which may be imposed with respect thereto by the terms of the reference.

A majority of the said commission shall have power to render a decision or finding upon any of the questions or matters so referred.

If the said commission is equally divided or otherwise unable to render a decision or finding as to any questions or matters so referred, it shall be the duty of the commissioners to make a joint report to both Governments, or separate reports to their respective Governments, showing the different conclusions arrived at with regard to the matters or questions so referred, which questions or matters shall thereupon be referred for decision by the high contracting parties to an umpire chosen in accordance with the procedure prescribed in the fourth, fifth, and sixth paragraphs of Article XLV of The Hague convention for the pacific settlement of international disputes, dated October 18, 1907. Such umpires shall have power to render a final decision with respect to those matters and questions so referred on which the commission failed to agree.

ART. XI. A duplicate original of all decisions rendered and joint reports made by the commission shall be transmitted to and filed with the Secretary of State of the United States and the Governor General of the Dominion of Canada, and to them shall be addressed all communications of the commission.

ART. XII. The International Joint Commission shall meet and organize at Washington promptly after the members thereof are appointed, and when organized the commission may fix such times and places for its meetings as may be necessary, subject at all times to special call or direction by the two Governments. Each commissioner, upon the first joint meeting of the commission after his appointment, shall, before proceeding with the work of the commission, make and subscribe a solemn declaration in writing that he will faithfully and impartially perform the duties imposed upon him under this treaty, and such declaration shall be entered on the records of the proceedings of the commission.

The United States and Canadian sections of the commission may each appoint a secretary, and these shall act as joint secretaries of the commission at its joint sessions, and the commission may employ engineers and clerical assistants from time to time as it may deem advisable. The salaries and personal expenses of the commission and of the secretaries shall be paid by their respective Governments, and all reasonable and necessary joint expenses of the commission incurred by it shall be paid in equal moieties by the high contracting parties.

The commission shall have power to administer oaths to witnesses and to take evidence on oath whenever deemed necessary in any proceeding or inquiry or matter within its jurisdiction under this treaty, and all parties interested therein shall be given convenient opportunity to be heard, and the high contracting parties agree to adopt such legislation as may be appropriate and necessary to give the commission the powers above mentioned on each side of the boundary, and to provide for the issue of subpoenas and for compelling the attendance of witnesses in proceedings before the commission. The commis-

also may adopt such rules, of procedure as shall be in accordance with justice and equity, and may make such examination in person and through agents or employees as may be deemed advisable.

ART. XIII. In all cases where special agreements between the high contracting parties hereto are referred to in the foregoing articles such agreements are understood and intended to include not only direct agreements between the high contracting parties, but also any mutual arrangement between the United States and the Dominion of Canada expressed by concurrent or reciprocal legislation on the part of Congress and the Parliament of the Dominion.

ART. XIV. The present treaty shall be ratified by the President of the United States of America, by and with the advice and consent of the Senate thereof, and by His Britannic Majesty. The ratifications shall be exchanged at Washington as soon as possible, and the treaty shall take effect on the date of the exchange of its ratifications. It shall remain in force for five years, dating from the day of exchange of ratifications, and thereafter until terminated by 12 months' written notice given by either high contracting party to the other.

In faith whereof the respective plenipotentiaries have signed this treaty in duplicate and have hereunto affixed their seals.

Done at Washington the eleventh day of January, in the year of our Lord one thousand nine hundred and nine.

ELIHU ROOT. [SEAL]  
JAMES BRYCE. [SEAL]

And whereas the Senate of the United States by their resolution of March 3, 1909 (two-thirds of the Senators present concurring therein), did advise and consent to the ratification of the said treaty with the following understanding, to wit:

*Resolved further (as a part of this ratification),* That the United States approves this treaty with the understanding that nothing in this treaty shall be construed as affecting or changing any existing territorial or riparian rights in the water, or rights of the owners of lands under water, on either side of the international boundary at the rapids of the St. Mary's River at Sault Ste. Marie in the use of the waters flowing over such lands, subject to the requirements of navigation in boundary waters and of navigation canals, and without prejudice to the existing right of the United States and Canada each to use the waters of the St. Mary's River within its own territory; and, further, that nothing in this treaty shall be construed to interfere with the drainage of wet, swamp, and overflowed lands into streams flowing into boundary waters, and that this interpretation will be mentioned in the ratification of this treaty as conveying the true meaning of the treaty and will, in effect, form part of the treaty.

And whereas the said understanding has been accepted by the Government of Great Britain and the ratifications of the two Governments of the said treaty were exchanged in the city of Washington on the 5th day of May, 1910:

Now therefore, be it known that I, William Howard Taft, President of the United States of America, have caused the said treaty and the said understanding as forming a part thereof to be made public to the end that the same and every article and clause thereof may be observed and fulfilled with good faith by the United States and the citizens thereof.

In testimony whereof I have hereunto set my hand and caused the seal of the United States to be affixed.

Done at the city of Washington this thirteenth day of May, in the year of our Lord one thousand nine hundred and ten, and of the independence of the United States of America the one hundred and thirty-fourth.

By the President:

WM. H. TAFT.

[SEAL.] P. C. KNOX,  
*Secretary of State.*

#### PROTOCOL OF EXCHANGE.

On proceeding to the exchange of the ratifications of the treaty signed at Washington on January 11, 1909, between the United States and Great Britain, relating to boundary waters and questions arising along the boundary between the United States and the Dominion of Canada, the undersigned plenipotentiaries, duly authorized thereto by their respective Governments, hereby de-

clare that nothing in this treaty shall be construed as affecting or changing any existing territorial or riparian rights in the water, or rights of the owners of lands under water, on either side of the international boundary at the rapids of the St. Mary's River at Sault Ste. Marie in the use of the waters flowing over such lands subject to the requirements of navigation in boundary waters and of navigation canals and without prejudice to the existing right of the United States and Canada each to use the waters of the St. Mary's River within its own territory; and, further, that nothing in this treaty shall be construed to interfere with the drainage of wet, swamp, and overflowed lands into streams flowing into boundary waters, and also that this declaration shall be deemed to have equal force and effect as the treaty itself and to form an integral part thereto.

The exchange of ratifications then took place in the usual form.

In witness whereof they have signed the present protocol of exchange and have affixed their seals thereto.

Done at Washington this 5th day of May, 1910.

PHILANDER C. KNOX. [SEAL.]  
JAMES BRYCE. [SEAL.]

[H. R. 7694, Sixty-second Congress, first session. In the House of Representatives, April 27, 1911. Mr. Simmons introduced the following bill, which was referred to the committee on Foreign Affairs and ordered to be printed.]

A BILL To give effect to the fifth article of the treaty between the United States and Great Britain, signed January 11, 1909.

*Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,* That no water shall be diverted from the Niagara River above the Falls of Niagara within the State of New York for power purposes without the written consent of the Secretary of War, who is hereby authorized to give such consent, by revocable permits, to persons, companies, or corporations having authority from the said State to make such diversions, and to a total amount not exceeding in the aggregate the amount allowed by the treaty between the United States and Great Britain, signed at Washington on the 11th day of January in the year 1909: *Provided,* That no such permit shall be granted allowing diversions of water exceeding in the aggregate 15,600 cubic feet per second without the consent of the State of New York and of the commissioners on the part of the United States in the international joint commission provided for by said treaty.

Every diversion of water in violation of the foregoing provisions shall be a misdemeanor punishable by a fine not exceeding \$2,500, or by imprisonment not exceeding one year, or both, in the discretion of the court.

The Secretary of War shall make regulations for preventing the diversion of water from the Niagara River above the Falls of Niagara in excess of the amounts consented to by him pursuant to the said treaty and to this act, and all permits for the diversion of water granted under the act entitled "An act for the control and regulation of the waters of Niagara River, for the preservation of Niagara Falls, and for other purposes," approved June 29, 1906, shall continue in force until revoked by the Secretary of War or superseded by other permits issued by him.





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*Ex. 8. 16*  
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